NATIONAL FISHERMAN

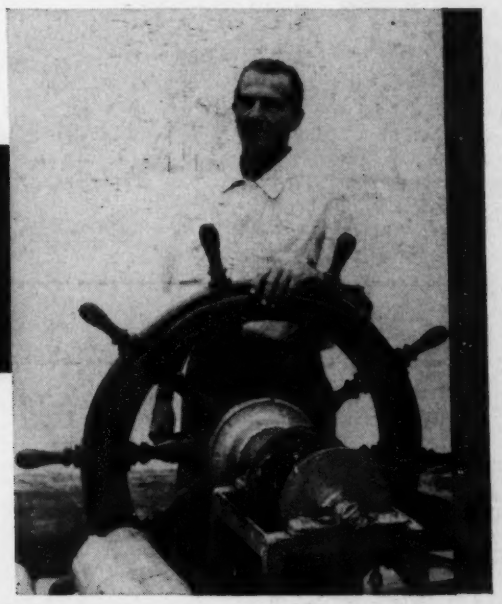
JANUARY 1956

JAN31'56

"Columbian Manila Rope was my 'Life-Line' for 6400 miles!"

Mr. Willis lashing the large balsa logs together with strong, water-resistant Columbian Manila.

The "Seven Little Sisters" puts out to sea. Voyage began June 23, 1954, was completed on October 14, after drifting and sailing 6400 miles!



. . . says William Willis at end of longest voyage ever made by a single man in ocean history

6400 miles from Peru to Pago Pago, Samoa in less than four months! That's the all-time record for solo voyages. It was made by 61-year-old merchant seaman William Willis on a sailing raft.

Mr. Willis built his raft of seven large balsa logs, held together with over 400 separate lashings of 1¼" and ¾" Columbian Manila. Fibre ropes were necessary for these fastenings. Bolts, chains or wire would have torn the raft apart in the always-moving sea.

Mr. Willis' long experience as a seaman led him to select Columbian Manila for this vital duty. Thorough waterproofing, lubrication, and protection of fibres against rot were the all-important requirements for rope which was to be constantly immersed in sea water.

"The success of the trip depended on the lashings," said Mr. Willis. "I can truly say that I sailed on Columbian Rope."

Every foot of Columbian Manila Rope is adequately protected against decay for YOUR climate, YOUR uses, YOUR methods of handling!

COLUMBIAN ROPE COMPANY Auburn "The Cordage City" N. Y.

Red White Blue

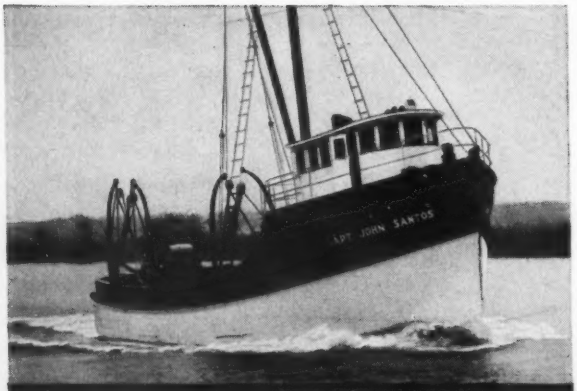
COLUMBIAN ROPE TWINES

TRADE MARK

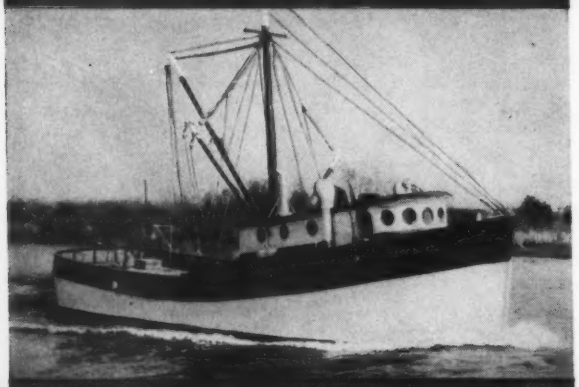
"Dependable service and economy

have led me to install 22 GM Diesels in the past 3 years"

—Capt. John Santos Carinhas
Patterson, La.



CAPT. JOHN SANTOS, 90-foot menhaden boat powered by two GM "6-110" Diesels



PESCADOR, 70-foot trawler powered by GM "6-110" Diesel

DIANNE and CAROLE, 120-foot menhaden boat powered by two GM "6-110" Tandem-Twin Diesels

"IT'S been six years since I installed my first General Motors Detroit Diesel, a Twin '6-71' in the 'Capt. John Santos'," relates this outstanding fisherman. "Since that time this boat has been repowered—again with GM, but with a pair of '6-110's.' Year by year since this first installation, we've added GM after GM Diesel in both our menhaden and shrimp boats. In a single year, 1953, eight of our boats were fitted with GM Diesels—and we now have 13 GM Diesel-powered boats in our fleet.

"We've found that with GM Diesels powering our boats, we have less breakdown time—which means more fishing time and more dollars in our pockets.

"Our shrimp boats range as far south as Campeche and often run into rough weather (40-50 mile gales) but our powerful GM Diesels have always proved equal to the task and brought our boats and crews safely home.

"General Motors service, too, has proved excellent, and this is a very important consideration—every hour we lose while tied up waiting for parts or service is lost fishing time and means lost profits.

"It is our plan to standardize our entire fleet of boats with GM Diesel power. I can recommend GM Detroit Diesels to fishermen everywhere without reservation."

When you buy a new boat—or repower your present one—call in your local GM Marine Diesel Distributor. He'll give you full details—show you how profit-making fishermen better their net with GM Diesel power.

Single Engines..30 to 300 H.P. Multiple Engine Units..Up to 893 H.P.

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America's Largest Builder of Diesel Engines

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Whose rope had him tied up in knots
Till the day when in hope
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Now Botts uses K-ting Rope lots.

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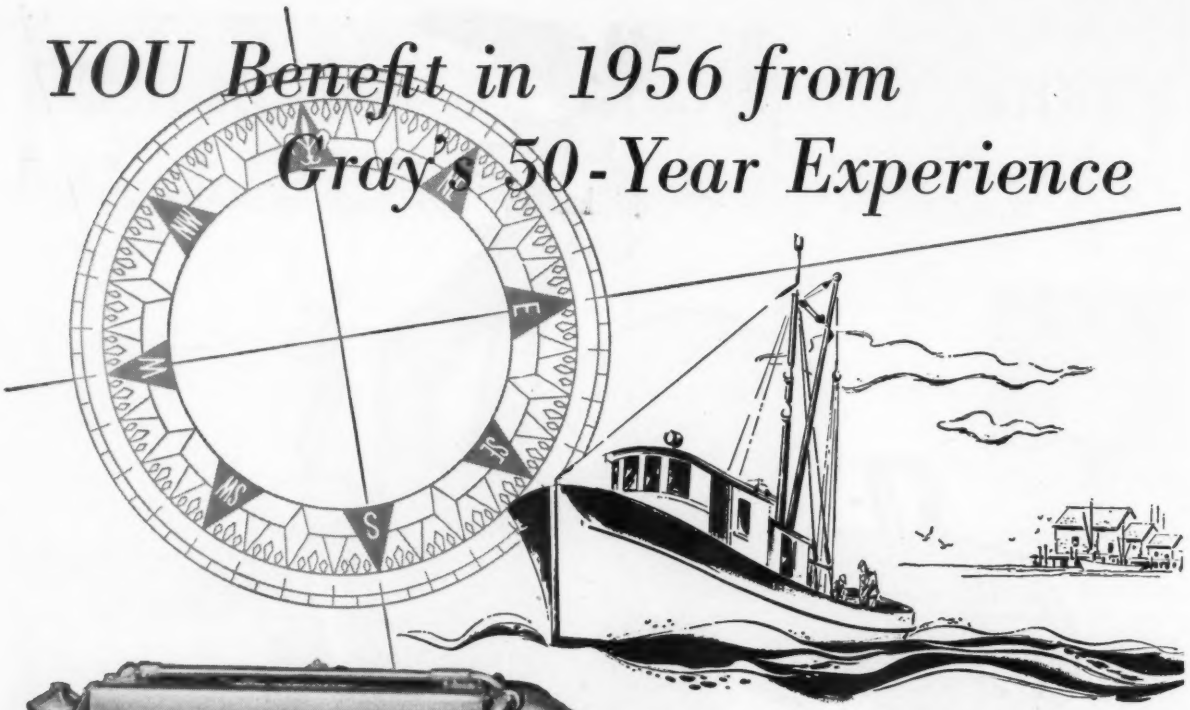

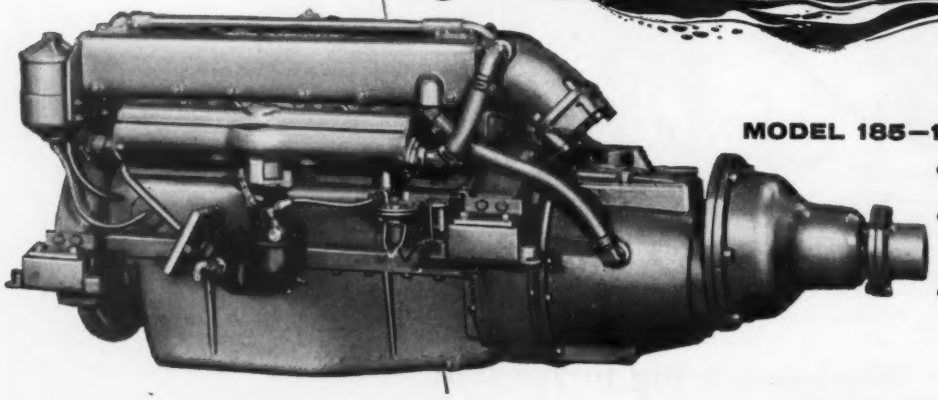

MODEL 185—185 hp at 3400 rpm

- big 427 cu. in. displacement
- excellent idling for continuous low-speed operation
- shown with hydraulic reverse, 2:1 reduction gear "offset up"

Your widest choice of "Fours" and "Sixes"...

GASOLINE ENGINES

Wide-Range Models—Both high and low speed models are listed here, with water-heated intake manifolding on the big high-output "sixes" providing excellent performance at continuous low speeds:

	Cyls.	HP	RPM	Displ.
Light Four—69	4	16	1800	69
Sea Scout 91	4	25	2000	91
Four—45	4	45	3600	91
Four—112	4	31	2200	112
Model 620	4	60	3200	140
Four—162	4	42	1800	162
Model 70	4	70	3400	162
Four—75	4	75	3600	162
Model 100	6	100	3400	226
Model 110	6	110	3600	226
Six—112	6	115	3600	226
Model 115	6	115	3400	244
Model 120	6	120	3600	244
Model 135	6	135	3600	244
Model 150	6	150	3400	330
Model 165	6	165	3400	363
Model 175	6	175	3400	363
Model 185	6	185	3400	427
Model 200	6	200	3400	427

DIESEL ENGINES

Graymarine Diesels are high-speed type; four cycle for fewer parts and less maintenance:

	Cyls.	HP	RPM	Displ.
Four—D129	4	25	2000	129
Four—D157	4	30	1800	157
Four—D260	4	50	1800	260
Six—D427	6	100	2200	427
Six—D572	6	135	2200	572

50th Year 1906 1956

GASOLINE AND DIESEL MARINE ENGINES

GRAYMARINE

GRAY MARINE MOTOR COMPANY, 710 CANTON AVENUE, DETROIT 7, MICHIGAN • SUBSIDIARY OF CONTINENTAL MOTORS CORPORATION

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NATIONAL FISHERMAN

Formerly ATLANTIC FISHERMAN

Serving the Commercial Fishing Industry of the United States

Frozen Seafood Market Expanding

Sales of frozen seafood during 1955 totaled 450 million pounds, according to the National Frozen Food Distributors Association. This represents a gain of 25 percent over the 1954 consumption of 359 million pounds.

The rise in frozen seafood consumption is out-pacing the frozen food industry as a whole, which showed a 10 percent growth last year.

Being a segment of the fast growing frozen food industry offers a big opportunity to the fish business. Its products offer a wide variety of high-protein content foods, which are easy to prepare and serve. Attractive packaging in convenient sizes has given seafood the added appeal which is necessary for successful merchandising.

In addition to increased consumer acceptance, wider distributing facilities for frozen seafood have been an important factor in building sales. Many areas which are too far removed from the seaboard to receive fresh fish, now have access to frozen products.

It is reported that 98 percent of the major wholesale distributors of frozen foods handled fish sticks last year, while 91 percent sold breaded shrimp. Precooked seafoods, which were stocked by only 65 percent of the distributors in 1954, were handled by 85 percent in 1955.

Biggest gains in the frozen seafood line have been shown by fish sticks and shellfish. Consumption of fish sticks rose from 47 million pounds in 1954 to 67 million last year, an increase of 42 percent; while frozen shellfish products increased from 128 to 181 million pounds, or 41 percent. In the same period, frozen fillet sales went from 185 to 203 million, up 10 percent.

It is generally recognized that fish sticks have been a real boon to the fishing industry. Starting off with sales of only six million pounds in 1953, their rise in popularity has been spectacular.

In a recent survey, fish sticks were found to be best sellers among frozen food items by 19 percent of the distributors, while they were reported as second best sellers by 22 percent, and in third place by 36 percent of the distributors.

The effect of the increased demand for fish sticks has been two-fold; a diversion of cod, haddock and perch, the raw material for sticks, from an oversupplied fillet market; and at the same time a re-awakening of buying interest in other seafood items. That is a phenomenon common to merchandising. If there is one "hot" item in a line that attracts the customers, more of the other associated products may be sold by placing them alongside the fast mover. Such, apparently, has been the case in seafoods.

Frozen shrimp, the leading shellfish item, had carryover inventories at the beginning of last year that were at an all-time high. But 1955 sales proceeded at such a furious rate that they ran far ahead of production, and inventory at the year-end was trimmed back to a low level.

The rising consumption of frozen seafood augurs well for the future of the fishing industry. Provided these products are vigorously promoted, and high quality is maintained, the per capita consumption of fish and shellfish will continue its upward curve.

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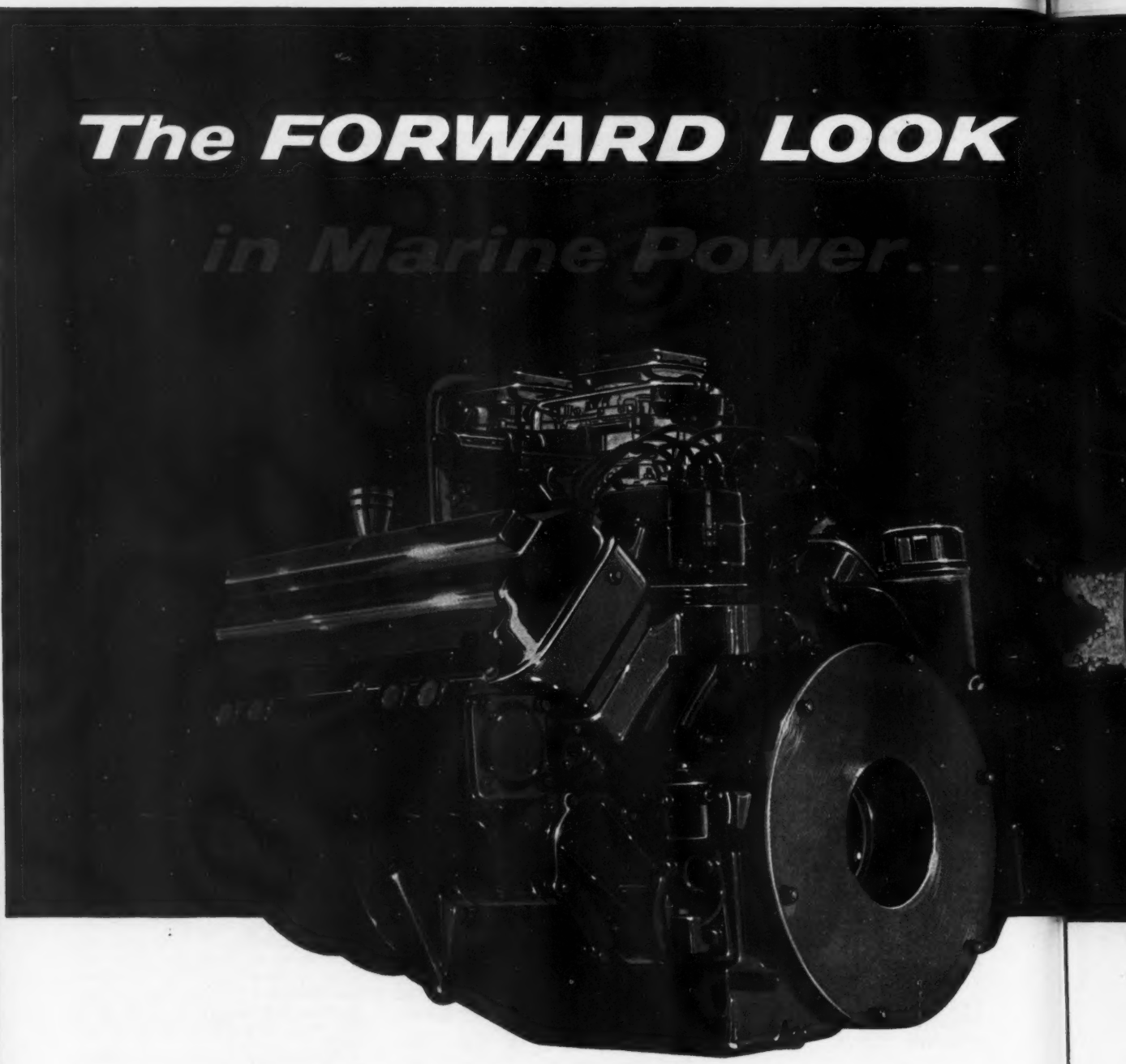
The FORWARD LOOK

in Marine Power...



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Your choice of V-8s or Sixes

ACE (M-46)
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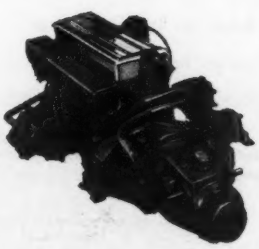
110 h.p. In-Line 6 Engine

CROWN (M-47)
125 h.p. In-Line 6 Engine



CROWN SPECIAL (M-47S)
135 h.p. In-Line 6 Engine

1956 CHRYSLER

Oversquare Short-Stroke

V-8 Marine Engines

CHRYSLER MARINE V-8s

Ahead of the Trend to Shorter-Stroke

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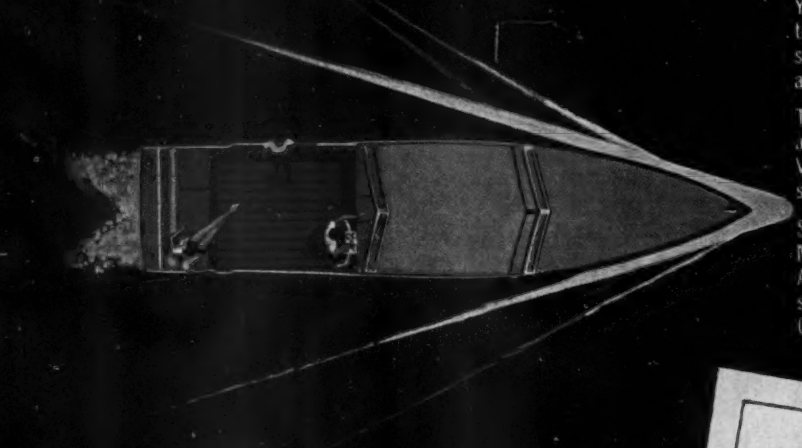
Square—Same Bore and Stroke

Chrysler **Oversquare**—Larger Bore than Stroke



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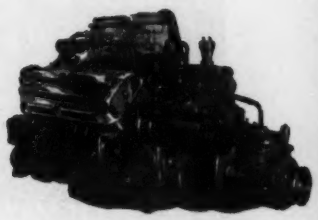
150 h.p. V-8 Engine

MAJESTIC (M-49)
160 h.p. In-Line 6 Engine

IMPERIAL V SPECIAL (M-45S)
200 h.p. V-8 Engine



IMPERIAL V-250 (M-45SP)
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FISHERY PROGRESS

Economic • Legislative • Technical

National policy for fisheries would be established under legislation which has been introduced in Congress. On House side, Congressman Wilson of California has introduced H.R. 8001, to "establish a National policy with respect to commercial fisheries; to establish the office of Assistant Secretary of Commerce for Commercial Fisheries, and define his functions, powers, and responsibilities; to strengthen the commercial fisheries segment of the National economy, and for other purposes."

Senator Warren G. Magnuson of Washington, chairman of Senate Committee on Interstate and Foreign Commerce, is making plans to introduce in Senate legislation designed to establish National policy for fisheries of Nation. All fish industry people will have opportunity to express their opinions regarding both bills at public hearings.

Constitutionality of Trade Agreements Act is being questioned by Star-Kist Foods, Inc., Terminal Island, Calif. tuna canner, who has asked Federal Customs Court in New York to declare against the 1934 Act. Under the law, periodically extended and amended, the President has authority to lower American import duties in return for similar concessions from other nations.

Star-Kist company's suit arises from recent reduction in tariff on imported tunafish, packed in brine, from 25 to 12½ percent. Star-Kist charges that President did not have constitutional authority to cut tariff on tuna, and that rate should be restored to 25 percent.

Fishery exemption in Labor Laws does not apply in any plant canning oysters, according to recent Supreme Court ruling. Canning in this sense means heat processed and hermetically sealed. Henceforth, after boat is unloaded any part of work in oyster canning must be considered to come under Labor Laws. Furthermore, if shucking for fresh trade is going on in the oyster plant, this labor also will be considered under minimum wage law.

The new ruling was Supreme Court's reconciliation of two opposing rulings in different Federal jurisdictions, one in South Carolina involving Blue Channel Corp., and the other in Louisiana in which Myrtle Grove Packing Co. was defendant. Canners who might be affected by Supreme Court ruling are reminded that minimum wage rate of $1.00 per hour becomes effective March 1.

Cold storage holdings of all fish and shellfish on December 1 were 189,577,000 pounds, as compared to 206,437,000 on same date a year ago. Smaller holdings of cod, haddock, ocean perch, halibut, salmon and shrimp, accounted for most of decrease. Items with larger holdings were blocks and slabs, flounder, whiting, lobster tails, and scallops. December holdings this year were approximately at 5-year average.

Fish cookery demonstration program for 1956 has been arranged by Fish & Wildlife Service, and will include an estimated 200 demonstrations, most of them for school lunch groups. These demonstrations are part of broad program of Fish and Wildlife Service in development of wider markets for fish and shellfish. Currently work is being done with funds obtained from Saltonstall-Kennedy Act. Recipes developed in test kitchens at College Park, Md., and Seattle, Wash., are used in demonstrations.

Fish and Wildlife Service has given approximately 1,300 fish cookery demonstrations since 1946. Of these, 1,000 have been for school lunch groups, and 300 for educational, institutional and homemaker groups. The homemaker and educational demonstrations are given to persons who teach others, such as college home economic

classes, extension workers, and gas and electric cooking school personnel. One fishery cookery demonstration given to a cooking specialist class by Fish and Wildlife Service, was passed along to 16,000 individual homemakers during following year.

Until recently most of the work has been done in Eastern half of United States. In 1956, project will be expanded to provide for nationwide program. In some States in which demonstrations were given five or more years ago, additional series now are being scheduled to train persons who have entered school lunch programs recently.

To date, following demonstrations have been scheduled, with others to follow: Texas, 50 demonstrations; California, 48; Maryland, 10; Missouri, 12; Wisconsin, 12; Virginia, 25; and South Carolina, 23.

Fishing within territorial waters of Chile, Ecuador and Peru will be allowed, provided foreign fishing craft obtain necessary permit and submit to existing regulations. This was revealed by delegates from the three Latin-American countries at third meeting of permanent South Pacific Fisheries Commission.

The three countries, through Declaration of Santiago, laid formal claim to maritime frontier 200 miles off their coasts. In recent months Ecuador and Peru have seized and fined foreign ships found whaling or fishing within the 200-mile zone. United States, Britian and other maritime nations recognize no sovereignty claims beyond traditional three-mile limit.

Research on electrofishing for tuna is being done by scientists of University of Hawaii, under contract with Fish & Wildlife Service's Pacific Oceanic Fishery Investigations. Experiments by University show that movements of 8 to 10-pound yellowfin tuna can be controlled in large, well-grounded tank.

The tank used measured 35 feet long, 4 feet deep, and 11 feet wide. By using 16-foot electrode spacing, it was possible to force tuna to swim to positive electrode when direct current interrupted at rate of 20 cycles per second was applied. Source of power was 6-volt storage batteries that energized bank of condensers.

Use of fish in manufacture of pet food has developed into increasingly important segment of fishery industry. Along Atlantic Coast, particularly Northeastern section, whole fish and fish cuttings from filleting process are source of raw material for animal pet food. In one section of Gulf Coast, a new fishery has been developed which is primarily devoted to catching whole fish for processing into cat food. On Pacific Coast, certain species of rockfishes and fish cuttings are used for canned pet food.

In most fisheries that use trawling as a method of fishing, quantities of unmarketable or undersized fish are discarded at sea. The Midwest has a similar disposal problem with fresh-water rough fish. However, there is a possibility that these less-desirable, fresh-water species can be used, and in time, create backbone of an important, pet-food processing industry. The U. S. Fish and Wildlife Service currently is conducting market research toward this goal.

Growth of pet food industry is illustrated by comparing phenomenal increase in number of standard cases of animal food packed in 1947 to that of 1954. In 1947, only 940,000 standard cases of pet foods (with fish as basic protein ingredient) were packed; while, in 1954, over 4 million standard cases were packed. Value has increased from 4 million to 19 million dollars.

Prospects are for an increasing demand for suitable protein food to be used in animal feeding. An example is the ever-increasing demand of fur-animal farmers, who are experiencing difficulty in obtaining horse meat at reasonable prices. There is good reason to believe that demand for fish and fish scraps as basis of animal food will increase.

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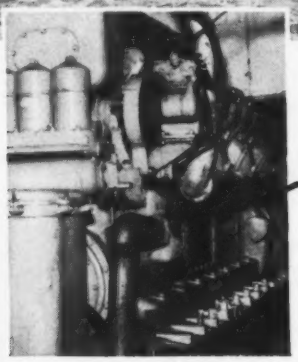

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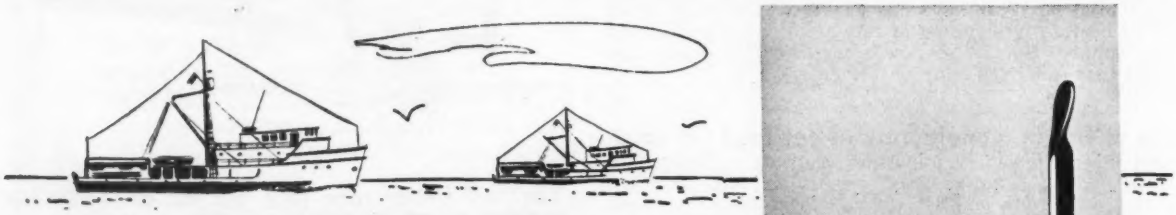

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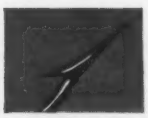
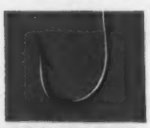


SHARP POINTS



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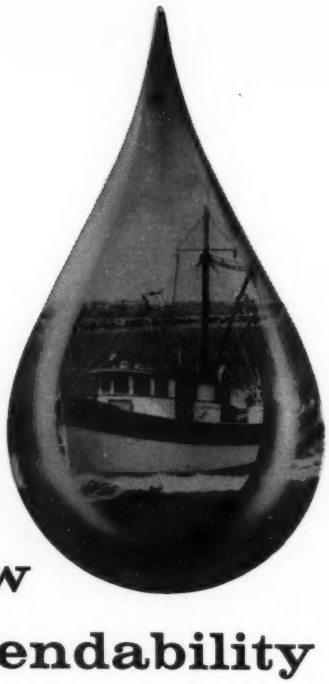

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MEMBER

Some Opinions on Small Dragger Design

By Howard I. Chapelle*

THE factors in design of small craft hull-forms are quite different from those of large vessels, and the dividing line appears to be at about 80-100 feet in Diesel fishermen. Small seagoing fishing craft have a very deep draft and great beam in proportion to length, as compared to large craft or merchant vessels. The small draggers commonly have great drag to the keel, so that the difference in draft, fore and aft, is great. The model of most small draggers shows more resemblance to that of the old, fast-sailing schooners than to a modern merchant ship.

For the required displacement, these small vessels are of rather large dimensions. This is necessary to give the required deck space and accommodations, as well as to produce reasonable speed in heavy weather. While very light displacement appears undesirable in these craft (the launch type of hull in large size has been tested and rejected in practice for offshore work), the large dimensions and moderate displacement (light) may result in block coefficient as low as 0.33. The midship form shows great dead rise, and the midsection coefficient may be only 0.60. The prismatic coefficient may be brought to about 0.53, or thereabouts, in light condition, or even lower.

To greatly increase the midsection area; retaining the existing block coefficient; does not appear practical, since the ends are already so fine, in the majority of these craft, as to cramp the sole in both forecastle and engine room. A reduction in hold depth is also impractical in most craft, as this would not only decrease headroom in both forecastle and engine room too much, but also would affect sea-keeping qualities.

Beam reduction is sometimes possible, but it must be remembered that this is often a matter determined by deck space requirements, particularly abreast the pilot and deckhouses. The beam/load water line ratio most commonly seen is between 0.27 and 0.32; the depth from light load line to rabbet amidships is often 0.10 to 0.15 the water line length. Hence the usual academic suggestion to small craft designers about lowering the prismatic coefficient is hardly realistic; a very low prismatic coefficient in so deep a model will produce an unsafe boat.

Displacement Has Been Decreased Slightly

The increase in steam-bent frame construction has brought about a trend toward somewhat lighter displacement than was formerly the case. However, the decrease in displacement has been moderate, for the reasons already given. Hence, the boats having steam-bent frames often have the same overall dimensions as a sawn frame vessel, but with more dead rise and only slightly sharper ends.

It is important to stress that the size of small draggers is not strictly determined by the minimum displacement requirement, but rather it is controlled by cruising range required, conditions of fishing and by the prevailing rules and regulations affecting some areas where fishing is done; the present licensing in Canada for inshore fishing and limitation on length for tonnage bonus are examples of the last.

The demand for small draggers is created by three conditions: cost of construction, the small fare and short trip, and the third is the desire in some areas to work on foul bottom. In working on foul ground, the small, light dragger has the advantage over a large and heavy boat, since the former will stop when she "hooks in" on a foul bottom, before the gear is torn up, while the latter will not. It would seem that boats for dragging on foul bottom should be of moderate beam and initial stability, to ease the shocks of rolling on the gear when it is "hooked in".

*This article was excerpted from a paper prepared by Mr. Chapelle, Cambridge, Md. Naval Architect, for discussion at the Annual Technical Meeting of the Society of Small Craft Designers, held recently at Mystic, Conn.

Two Designs Combined

As an example of the actual design of a small fishing boat, a 65-foot dragger will serve. The design shown here was the synthesis of two earlier designs of the same size, in an effort to improve on the two earlier boats. The use of a prototype in this manner is not unusual; altering length, or depth, but more rarely beam, without changing the form very much.

The reason why an owner prefers the modification of a successful boat is simply that he cannot afford a boat that is a serious failure, and so the use of a successful boat as the basis for a new one appeals to him, even though he knows and expects some departures from the original to be made in the new.

The requirements for the design shown here were—the boat was to be under 65 feet on deck, as this was the largest boat the owner felt he could afford and also the largest that could claim tonnage bounty. The fish hold capacity was to be over 50,000 pounds of fish and ice. Speed desired was "over" 9 knots.

The owner intended to have a 208 hp. Murphy Diesel engine, tailshaft generator, chain-driven trawl winch, two dories, one 250-lb. anchor, four gallows and two sets of "doors". The desired quantity of fuel as estimated by the engine agent was originally 1200 gallons and 550 gallons of water. Eight batteries, power-driven bilge pump and a hand pump in addition, depth finder, direction finder, ship-to-shore telephone, and all legal equipment were to be allowed for in design.

"Variables" in Estimated Weight

The estimated weight of the vessel was worked out at about 53 tons, light. As will be shown, however, there were a number of "variables" in this estimate, and to be truthful, a good deal of pure guesswork.

It was quite apparent from the known circumstances that the hull would be built under one contract, with an agent for the engine manufacturer furnishing and installing the main engine and auxiliaries in another contract; the trawl winch and gallows being furnished and installed by the manufacturer in a third contract, with deck leaders and other trawl gear.

It is rare that the designer has an opportunity to have rigid control of the engine and auxiliary installations in more than mere general arrangement; this only occurs in the instance when a boat is built under one contract alone and this commonly is the case only in steel construction, or when a wooden boat is built in a yacht-building yard.

In view of the dearth of information obtainable by the designer from the owner and others, it is not surprising to find the preliminary weight estimates including a great deal of guesswork. The installed engine, tanks and fishing gear too often exceed catalogue weights by a wide margin; on top of this there is always the possibility that the owner may change his mind and buy something "bigger and better" or have greater tankage than first reported, without mentioning it at the time the design is being prepared.

In practice, after estimating and guessing at all probable weights, a factor of safety is added to obtain the displacement light. The factor of safety seems to be about 10 or 12% of the estimated deadweight of the boat complete, modified by comparison with some previous design of the same approximate size. An excess over actual requirement in displacement can be counteracted by the ballast; this is usually estimated at about 0.20 of the light displacement, originally, and may run over this to 0.30 in rare cases when the boat is completed, depending upon certainty of the reports of the owner's intent and purchases. Too often, though, the designer eventually discovers his design did not have enough displacement,

(Continued on next page)

Dragger design by Howard I. Chapelle, showing hull lines. Length is 64'10", beam 19'4", draft 9', fish hold capacity 74,000 lbs.

due to changes in engines, tanks, etc. from what he planned, or he has a serious trim problem—somebody moved the engine!

Method of Fairing

In the accompanying plans it will be noticed that the lines are drawn to the inside of the plank and that level lines are used instead of water lines, so that fairing is done with sections perpendicular to the keel rabbet. The purpose of this style of fairing is to insure greater accuracy in the mold loft and in setting up molds or frames on the ways than has existed, when fairing of the lines was done in the modern orthodox manner.

The writer can find no serious objection to this form of lines drawing, in view of the relatively small amount of calculation that is really required. Experience has shown that it does produce far greater accuracy in the lines of the finished hulls than was formerly obtained in the same yards and shops. The displacement is calculated on molded lines and corrected to outside of plank by the old method, and the center of buoyancy determined for trim control.

Full Ends not Desirable

The writer does not think that it is desirable to employ full ends in these small fishermen. The sharp bow is desirable when speed is to be maintained in rough water, as required by the small-fare-short-trip operation. The bow should have a moderate flare, but this must begin at or very near the light load line and must flare outwardly in a nearly straight line or have a convex hump above but near the load water line.

The very hollow flare of the motor-yacht is undesirable, as this allows too much plunge before there is sufficient increase in buoyancy. Great flare is undesirable because of its great windage and the pounding that occurs in heeling in a seaway. The cutaway bow or schooner-bow, also seems undesirable in these craft, as this form causes "tramping" and throws much spray in a headsea.

In Winter, a dragger may be more endangered by spray than by solid water, for spray may cause extremely rapid icing-up. Hence the writer prefers a deep, rather square, forefoot with sharp water lines. The sections are rather V in the forefoot, as can be seen in the accompanying design, which has shown good performance in maintaining sea speed in rough water and in slow icing-up or "tramping", and the forefoot has not hurt steering qualities, contrary to popular belief.

The necessity for a large hold, forecastle and engine room result in the latter being well aft. This, too often, is the excuse for a very short and full run, of the "back of a bathtub" order. Such a run is most undesirable, not only in regard to speed and towing but also as to steering.

The accompanying lines show the writer's ideas of what the run of these boats should be. The old idea of having the quarterbeam buttocks cross the load water line in a straight line for at least a short distance below and above the latter in forming the run, appears to give satisfactory results in practice. The thickness near the sternpost shown is to allow the engine to be placed well aft; this appears to cause no harm to towing and steering qualities, but the engine so placed is a troublesome factor in trim control.

The center of buoyancy is not located by load water line proportion by the writer—instead an attempt is made to place the center on, or quite near to, the after bulkhead of the fish hold, as this commonly gives good trim in loading. The variation in lengths of the three main divisions of the arrangement, from boat to boat, seems to justify this rule-of-thumb approach.

"Canoe Stern" Becoming Popular

Draggers between 55 and 80 feet length may have a variety of stern forms, the round stern of the tug being quite popular. This may cause pounding, however, and attempts are made to overcome it by creating dead rise in the counter. The amount of dead rise possible is slight, however, and recently the sharp stern of the "cruiser" variety (known to small craft designers as the "canoe stern") has become rather popular. This follows the style of stern used extensively on Nova Scotia-built bootleggers and later small freighters, which was much cheaper and stronger than the old tug stern.

The form of stern shown in the accompanying plan

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Pacific Commission Favors Shorter Chinook Season

Seattle meeting of marine fisheries group also urges closed seasons on sablefish, petrale sole

THE Pacific Marine Fisheries Commission, which met in Seattle December 5, 6 and 7, recommended shortening of the commercial trolling season for chinook salmon in the Washington-Oregon area. Members of the Commission elected Robert J. Schoettler, who is Washington State Fisheries Department director, as chairman of their group. Schoettler succeeds Richard S. Croker, chief of marine fisheries for the California Fish and Game Department. Robert L. Jones, member of the Oregon Fish Commission, was named vice-chairman, while Croker was elected secretary.

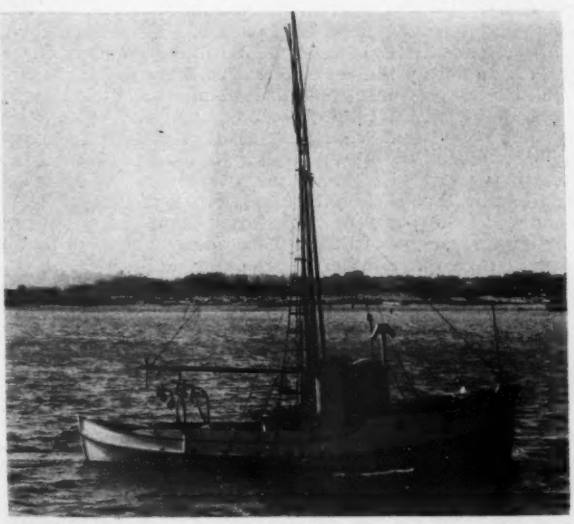
The Commission recommended that the offshore troll season for chinooks in 1956 be open from April 15 to September 30, instead of March 15 to November 30 as in the past. The proposal is designed to protect declining runs of Columbia River fall chinooks during the ocean phase of their life span, officials explained.

In its recommendation on the chinook fishery, the Commission said it would keep the chinooks under study, and that restrictions would be reviewed at the 1956 meeting in San Francisco. Concurrence of both Washington and Oregon was expected on the chinook season change, since heads of the fisheries departments of both States are members of the Commission.

Commercial fishermen contested the Commission's chinook proposal, contending that sports fishermen should share the burden of conservation. As a result, the Commission went on record in favor of a principle whereby all interests, including sports fishermen, would participate in conservation and restrictions. A recommendation that sportsmen be given a greater part in activities of the Commission was made by John Rayner, chief of operations of the Oregon State Game Commission's Division of Fisheries.

Explaining the need for a reduced chinook season, Jack Van Hyning, biologist for the Oregon Fisheries Department, said the Columbia River run of fall chinook salmon had reached the lowest point in its history both in landings and escapements. "Part of this decline is due to too much fishing," Hyning said.

Robert Schoning, assistant director of research for the Oregon Department, said fall chinook landings on the Columbia River had dropped to about 4,000,000 pounds in each of the past two years. There have been no additional regulations in that period to account for the decline, Schoning stated. At the same time, he added, indications are that spring and summer chinook runs are increasing, partly because of commercial fishing restrictions in force for several years.



The "Olive Ellen", 35' salmon troller owned by Eric Hotanen of Eureka, Calif., and powered with a 110 hp. Chrysler engine.

Robert J. Schoettler of Seattle, Wash., new chairman of the Pacific Marine Fisheries Commission.

Seek to Protect Sablefish

In an effort to halt the decline in abundance and average size of sablefish on the banks off Washington and Oregon, the Commission recommended that all sablefish landings be prohibited from November 1 through December 31, 1956.

The Commission also recommended that the season for petrale sole in Washington and Oregon be closed from February 1 to April 15, 1956, and that during that period a tolerance of petrale sole be allowed amounting to 6,000 pounds per trip to cover incidental catches while trawling for other species. The recommendation on the petrale sole fishery is designed to afford protection to the Winter concentrations of spawning petrale sole in the Esteban Deep, off southern British Columbia.

Albacore Tuna Research

Reports on albacore tuna research were of a preliminary nature, and no conclusions were drawn on migrations and habits. Efforts are being made to relate hydrographic conditions of the Pacific Ocean to the migration of tuna, and negotiations are under way with Japan to join an ocean-wide research program.

Harold Clemens of the California Fish and Game Department reported albacore concentrations off the Lower California coast. He noted that experiments have shown a few tuna migrating all the way across the Pacific to Japan.

Dr. Milner Schaeffer, director of the Inter-American Tropical Tuna Commission in San Diego, pointed out that high concentrations of zooplankton, microscopic sea life, usually result in heavy concentrations of tuna in the same vicinity.

C. B. Love of the University of Washington told the Commission that present studies do not indicate the exact position of the Japanese Current, which is believed to fluctuate at varying distances up to 800 miles off the coasts of Washington and Oregon.

On the subject of Alaska fisheries, Robert R. Parker, chief of the Alaska Fisheries Department, stated that there is no need for more regulation of black cod fishing in the territory. He said his report was based on findings from tagging experiments in three major areas of Alaska.

It was announced at the meeting that Milton C. James of the Washington State Department of Fisheries will become research coordinator for the Commission January 1. James, former executive director of the North Pacific Fisheries Commission, will succeed John T. Gharrett of Portland, who is joining the Fish and Wildlife Service in Alaska.

Capt. John Sisson's "North Star" (before mast stepped). Right: Mrs. Sisson christens boat at Gladding-Hearn yard, Somerset, Mass.

New 47′ Steel Dragger "North Star" Designed For Trash Fishing

THE *North Star,* new 47′ welded steel dragger designed exclusively for trash fishing, slid down the ways December 7 at the Gladding-Hearn Shipbuilding Corp., Somerset, Mass. Her owner is Capt. John Sisson, who is a charter member of the Point Judith, R. I. Fishermen's Cooperative, and the vessel is the first steel fisherman at that port.

The *North Star* was blessed by Rev. Owings Stone of the St. Johns Episcopal Church, Barrington, R. I.; she was christened by Mrs. John Sisson, wife of the owner. The dragger represents the first hull built at the new Gladding-Hearn yard in Somerset, and was designed by Preston R. Gladding, Naval Architect and President of the firm. Richard C. Hearn is Vice-President and Treasurer of the shipyard, while George R. Duclos recently was named Chief Planner and Expediter.

The new dragger has breadth of 14.5′ and depth of 6.9′. Steel plate ¼″ thick was used on the vessel's bottom, while 3/16″ plate was put on the sides and deck. Her gross tonnage is 23.22, and net tonnage is 12.

An exceptionally fine bow with generous flare and easy stern lines was incorporated into the design to permit smooth handling and dry riding in rough waters. The propeller and rudder have been kept well forward of the stern to give good maneuverability.

The vessel has an especially large fish hold—21′ x 6′ x 14′. In addition to the main hatch, the boat has seven watertight deck bunkering plates specially manufactured by Hathaway Machinery Co. to aid in speedily handling the fish by allocating them to the proper places.

Specially-applied Koppers B-50 Bitumastic compound, which protects against corrosion and has nontoxic composition, was used as a lining in the hold. The hull will carry in excess of 50,000 pounds of fish, and is constructed with specially-designed frames to speed the discharge of the cargo by the Fishermen's Cooperative hydraulic pumps. In addition to the main hold, a special hold for the storage of iced fish is available.

Engine and Pilothouse Forward

The engine and pilothouse of the vessel are placed well forward to allow maximum use of the space amidships for the fish hold. A fo'c's'le forward provides space for galley facilities and limited quarters for a crew of three. To counterbalance the weight of the engine, a 500-gal. fuel tank is carried aft. There is a lazarette forward of the tank for fishing gear stowage.

The *North Star* is powered by a 165 hp. General Motors 6-71 Diesel driving a 39″ x 28″ Columbian Bronze propeller through Twin Disc 3:1 reduction gear on 2½″ Monel shaft, giving the vessel a speed of 10 knots. The engine is cooled by fresh water, which is circulated through pipes outside the skin of the vessel.

Hancock Marine furnished the power take-off adapter on the forward end of the engine, using Twin Disc clutch, and also supplied the steering wheel. The vessel has Byers wrought iron rudder tube.

Other equipment on the *North Star* includes Ray Jefferson radiotelephone, Wilfrid White SurEcho depth sounder, Ritchie compass, 32-volt Surrette batteries, Delco generator, Wall rope, Marine Products pump and Burgess-Manning silencer.

George W. Wilcox Co. furnished Wilcox trawls, using Linen Thread Gold Medal netting and Tiger Brand wire rope. The new dragger is finished with International paint, and uses Socony Mobil fuel and lubricating oil.

Maine to Conduct Consumer Acceptance Tests for Sardines

A nation-wide program of consumer acceptance tests covering the various types of pack of Maine sardines was to be launched by the Maine Sardine Industry shortly after the first of the year. Executive Secretary Richard E. Reed said that more than 4,200 families in twelve cities will be personally interviewed.

It is hoped that from these tests valuable information will be obtained on the consumer side of the sardine market, which will assist the packers in planning for the future. Families will be asked to state their preferences for the different packs after actually tasting and examining samples which will be opened for them by the interviewer. Eight different processes will be tested, including conventional, baked, fried, mustard, tomato, raw pack, can-cooked and Belgium cooker.

Clam Management Program Discussed

At a meeting held December 16, representatives from the Sea & Shore Fisheries Department and the Fish & Wildlife Service met with persons connected with clamming interests in the Boothbay Region. Director of Marine Research Robert L. Dow pointed out that a general fund has been appropriated for use in cooperating with towns interested in the control and improvement of their flats.

Don Harriman, biologist, discussed specific situations where he felt the Clam Management Program could be of

help—first, closure of the areas in which very few marketable clams are left but in which there are a great many small clams; second, aid in keeping green crab predators out of extensive flats now attacked by them.

Boothbay diggers agreed unanimously that they were willing to share the cost of any flat improvement program in their area with the Region, and they they also would share the benefits of such a program. Members of the Boothbay Clam Committee selected are: Everett Greenleaf, Percy Barter, Jr., William H. Lewis, Maxcy Lewis and Philip Hodgdon.

Earlier in the month a similar meeting was held at Islesboro, with Don Harriman giving a report on the clam situation there. Harriman, with the assistance of interested diggers, constructed a crab fence in the Spring of 1955 to protect a heavy set of young clams in Broad Cove from attack by green crabs.

Fred Dodge spent some time in the Summer fishing crab traps in and outside the fence, and kept track of his catch with the figures showing that few if any crabs filtered inside the fence.

The value of the fence was further demonstrated by a November survey, when good survival of the 1955-56 year class of clams was found inside the fence. None of the 1955 set and little of the 1956 set survived outside the fence.

Seiners and Weirmen Elect Officers

The Maine Coastal Seiners and Weirmen's Assoc. held their annual meeting in Rockland last month, at which time the following officers were elected: Clinton Barlow of Boothbay Harbor, president; Ralph Byers, Winter Harbor, vice-president; Jack Dodge, Ash Point, treasurer; and Sanford Doughty, Chebeague Island, secretary.

Maine Sea and Shore Fisheries Commissioner Tupper spoke at the meeting and urged the fishermen to work to eliminate some of the poor legislation enacted in Maine in the name of conservation.

One of the subjects discussed was the proposed changes in the herring law. As it is now, the spokesman said, fishermen can sit on the bank and be out of work because they can't market herring under four inches, while Canadians can bring their catch into U. S. for marketing.

Area Opened for Clam Digging

The Sea & Shore Fisheries Department on December 13 opened a Stockton Springs area near the Penobscot River mouth for Winter clam digging. The area will be open until April, and will keep 10 to 15 diggers busy all Winter.

Since 1949, when the Department received funds to make frequent checks of pollution in clam flats, 15 or 20 areas have been opened for part-time or seasonal digging. Value of clams taken from those areas in the last five years was about $200,000.

The Department's work in transplanting seed quahogs has been ended for the Winter, with 9,540 bushels moved to better growing sites this year and a total of 14,510 bushels moved during the two years of the program.

Oyster Experiment Fairly Successful

A six-year experiment in propagation of European oysters in Maine coastal waters has produced fair success, but not enough to encourage private development. The mollusks have prospered in some areas, particularly in the Boothbay Harbor region, where there has been successful propagation each year since the oysters were first bedded down.

It is believed that the bottom along much of the Maine coast is too soft to give oysters the kind of environment they need. Those bedded on rock or shells have done better than those on soft bottoms.

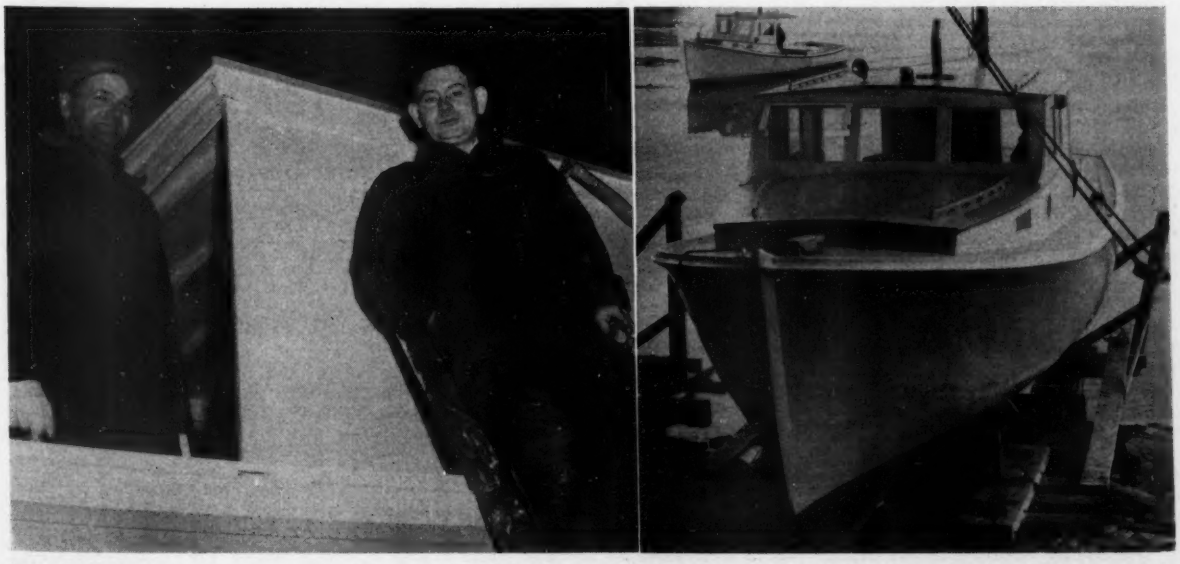
New Diesel-Powered "Grayling" Joins Monhegan Lobster Fleet

A trim new Diesel-powered lobster boat, the *Grayling*, was launched in December by Rockland Boat Shop, Rockland, Maine, for Capt. Manville Davis of Monhegan. She is 38' long, has a 11' beam and draws 3'10" of water.

The new craft is solidly constructed, having 1½ x 2⅛" steam bent oak frames on 10" centers, 1⅛" cedar planking, a 5½" oak keel and Monel fastenings. She is finished with International paints.

A 120 hp., 1600 rpm. JMS Cummins Diesel powers the *Grayling*, giving her a speed of approximately 12 knots. The engine is fitted with a Capitol 2:1 reduction gear, and turns a 26 x 19 Columbian propeller on a 2" Monel shaft with Goodrich Cutless rubber stern bearing. The boat is equipped with Columbian worm-type steering gear, and a Bendix depth recorder.

Rockland Boat Shop now is planking a 44' party fishing boat for April launching. This vessel is owned by Capt. Knute Lovgren of Brielle, New Jersey, and will be powered by an 8-cylinder, 150 hp. Chrysler Royal engine.



Owner Manville Davis of Monhegan, Me., left, and builder Sulo Gronros of Rockland, Me., with new 38' lobster boat "Grayling", powered by 120 hp. Cummins Diesel.

55'6" shrimper "Wilma", owned by E. D. Aoughsten of Palacios, Texas, and powered with a 120 hp. Caterpillar Diesel which turns 38 x 36 five-blade Michigan propeller through 2:1 Twin Disc reduction gear. Other equipment includes Surrette batteries, Columbian rope, Linen Thread Co. Gold Medal nets, Stroudsburg hoist, Northill anchor, Bendix depth sounder and Wickwire wire rope. She is finished with Woolsey paint, and uses Humble lubricating oil.

Texas Bays Closed to Shrimp Trawling

Bays and inland salt water lakes were closed to shrimping with large trawls December 15, and will remain closed until March 1, according to the Texas Game and Fish Commission. This law provides that shrimp trawls wider than 10 feet at the mouth and longer than 25 feet cannot be used lawfully in the bays, inlets, passes and inside salt water lakes for taking shrimp during this period. The order does not restrict sizes of shrimp trawls used in the Gulf of Mexico.

The regulation further provides that shrimp may be taken for bait from tidal waters at any time with a minnow seine not more than 20 feet long, cast net, or shrimp trawl not more than 10 feet wide at the mouth and 25 feet long. There is no minimum limit placed on shrimp size. The law requiring a 5½ inch limit on shrimp is not being enforced at present.

New Trawler Joins Fleet

W. L. Hardee's new shrimp trawler *Captain Ring* recently joined his fleet of shrimpers working out of Brownsville. This boat, like the six other trawlers in the Hardee fleet, was built by Diesel Engine Sales, Inc. of St. Augustine, Fla.

The *Captain Ring* is 67 ft. in length with a beam of 18½ ft. and draft of 6½ ft. She has a net capacity of 30 tons.

Power is provided by a D13000 Caterpillar Diesel engine turning a four-blade Columbian Bronze propeller on 3-inch Tobin Bronze shaft, through 3:1 Snow-Nabstedt reduction gear. She has Onan generator, Surrette batteries, and a 515½T Stroudsburg hoist.

Shrimp Production Down

The 30-day period from November 21 to December 20 was one of decreasing production. At the close of the period all trawlers were in and unloaded, and total production was far below that of the previous month's 1,034,800 lbs. of heads-off shrimp.

Production of edible finfish was above the demand for the period from November 21 to December 20. Prices were lower, and some fish could not be sold.

Speckled sea trout led bay fish production; red drum was second, with black drum third.

Oyster Harvesting Begins

Oyster production was starting late last month on the upper coast. Galveston Bay area has made a few shipments. It is predicted that production will be low.

Shrimp Association Committees

The roster of new chairmen of standing committees of the Shrimp Association of the Americas has been announced by Jim Barr of Brownsville, executive secretary.

Virgil Versaggi of Brownsville has been named chairman of "Advertising and Publicity", and John Ferguson of Fort Myers, Fla., heads "Membership". Representatives from Mexico are Hector Manuel Ferreira, "Quality Control and Research", and Zygmunt Warren, "International".

Florida-Based Boats to Start Exploratory Shrimp Program

Two vessels scheduled to do exploratory shrimp work beyond the continental shelf in the Atlantic Ocean, are to be based at Jacksonville, Fla. The program, according to Harvey R. Bullis, Jr. of the Fish & Wildlife Service, will last at least six months. Results of the exploration will determine whether it will be extended beyond that time.

Most of the work will be in deep waters between Cape Canaveral, Fla. and Cape Hatteras, N. C. The boats, with three crewmen and two or three fisheries experts each, will be the Service's 75 ft. *George M. Bowers* and a larger shrimper to be chartered.

Greek Divers Due at Tarpon Springs

Ten of a proposed 100 deep-sea divers last month were slated to arrive in Tarpon Springs from Greece, to give the local sponge industry the help some of the industry's followers say it needs to get back on its feet.

Nick Stamathis, attorney for the industry improvement committee, said the necessary documents for admitting four of the first 10 divers had been filed. The divers and the Tarpon Springs men who must sponsor their entry and guarantee them jobs when they arrive, are John Kleoudis and Nicholas Xypolitas, sponsored by John Samarkos; Christodoulis Galanos, sponsored by Louis Galanos and John Mavrofridas, sponsored by Mike Gianaris.

New Crab Meat Plant Operating

"Seasweet Crab Meat" is now being produced in a new, white concrete building, recently erected near Miller Point Fish House at Crystal River. The enterprise is owned and operated by Mr. and Mrs. Clyde H. Lucas, formerly of Naples, Fla. This industry will employ 20 to 25 people at peak production.

Aside from the inside workers, crabbers, as independent fishermen, will have a ready market for all the crabs they bring in. After the meat is picked, it is put into one-pound cans that are not hermetically sealed—the difference between the fresh pack and the canned crab meat. These cans are immediately iced, but not frozen, and are shipped by refrigerated trucks and express to northern markets.

Fishermen Want to Keep Catfish

The State Game & Fresh Water Fish Commission recently received a recommendation from its staff that com-

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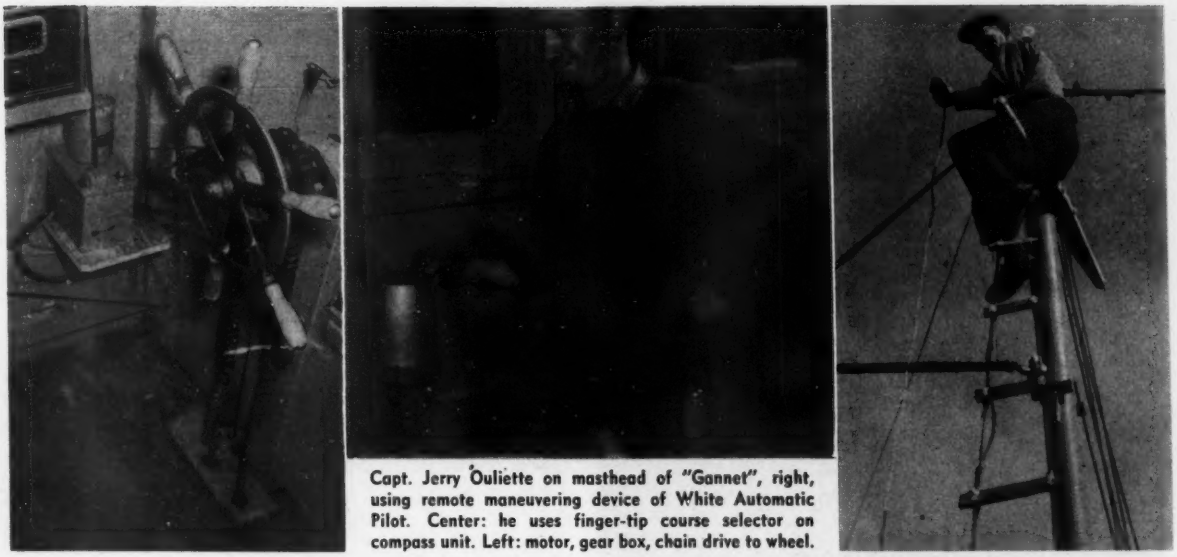


Capt. Jerry Ouliette on masthead of "Gannet", right, using remote maneuvering device of White Automatic Pilot. Center: he uses finger-tip course selector on compass unit. Left: motor, gear box, chain drive to wheel.

mercial fishermen be permitted to keep catfish taken in shad fishing operations in the St. Johns River and Lakes George and Crescent. Oscar Morris, a commercial fisherman, said it is impossible to prevent the hauling up of catfish along with shad.

Boat Donated for Research Work

The State Board of Conservation is soon to get a 100-ft. boat valued at $100,000 as a gift, for use in conservation and research work.

Conservation Director Ernest Mitts accepted the boat with the understanding that strict limitations would be put on its use. The Diesel-powered craft has accommodations for ten or more.

Raising Funds to Replace Boat

Lealman Volunteer Fire Company of St. Petersburg last month was promoting a move to raise funds to help replace the fishing boat *Jean* which sank in the Gulf on November 14. Reuben Williams, 27-year-old commercial fisherman and sole survivor of the sea tragedy which claimed three lives, is a member of the Board of Directors of the Lealman Fire Company.

Mackerel Boat Has Masthead Steering with Automatic Pilot

The advantages of an automatic pilot for smaller fishing boats were demonstrated recently by the 38-foot mackerel fisherman *Gannet* on a run from Long Island to Gloucester, Mass.

Capt. Jerry Ouliette, of Hampton Bays, L. I., owner and operator of the boat, used his new Model 10 White Automatic Pilot all the way and cut three hours from his normal running time. On his return trip, Capt. Ouliette encountered adverse weather but reported his boat steered much better than would have been possible with manual steering.

This is the first commercial vessel installation of the White Pilot, made by Wilfrid O. White & Sons, Inc., and put aboard the *Gannet* by Sag Harbor Electronics at their dock in Sag Harbor, N. Y.

A special feature of the new equipment is the remote maneuvering device, which allows the Captain to steer from the masthead by remote control. The motor, gear box and chain drive to the steering wheel are located in the pilot house, and there is finger-tip course selection.

Long Island Oystermen Want Moriches Inlet Kept Open

Long Island fishermen were greatly disturbed last month when Park Commissioner Robert Moses suggested that Moriches Inlet be abandoned, an action which the fishermen believe would result in damage to the shellfish industry in Great South Bay. Moses suggested that all efforts to obtain Federal aid should be concentrated on Shinnecock Inlet because the Government could not afford to dredge both.

Last month 2,000 bushels of seed oysters from Hudson River beds were planted on grounds owned by G. Vanderborgh & Son of West Sayville. These were the first placed in Great South Bay waters since 1946.

In 1933 Moriches Inlet was created by a storm, but was sealed by erosion in 1941. This resulted in serious damage to the $1,000,000 shellfish industry. In 1952, a $1,000,000 combined State, county and Brookhaven Town project to reopen the channel was approved. With the help of another storm in 1953 the inlet was reopened, and last year baymen in this section reported that the bay was the cleanest it had been in many years.

Cod Fishing Improving

Commercial fishermen from Long Island early last month reported that catches of cod were steadily picking up. However, bad weather at times hampered fishing operations and floundering was considered on the poor side.

The clammers, however, have been going right on with their digging unless the weather was so windy or the temperature was so low that there was danger of the clams freezing on the deck .

Speedway Named Universal Distributor

Speedway Marine Products, a division of Consolidated Shipbuilding Corp., has been appointed Universal distributor for metropolitan New York. Speedway will maintain their showrooms, engine and parts stocks and complete service facilities staffed with factory trained personnel at 154 Pilot St., City Island, New York 64, N. Y.

Eugene Czarich, who has been associated with Universal marine engines and lighting plants since 1933, is manager of Speedway Marine Products. Joe Brennan, who has headed Universal parts and service in New York for 20 years, is manager of the parts and service department. Parts for any Universal engine up to 21 years old can be furnished out of stock at Speedway.

Capt. "Halibut John" Borten, left, aboard new 55' Hatteras Trawler "Halibut John", with Elwood C. Arback and Anthony B. Guth of Philadelphia, Pa., who own the vessel with him. The craft was constructed by Morehead City (N.C.) Shipbuilding Corp., and is powered with a 6-71 General Motors 165 hp. Diesel.

North Carolina Fleet Gets New Long-Range Shrimper

Halibut John is the name of a new 55' Hatteras Trawler built by Morehead City (N. C.) Shipbuilding Corp., and "Halibut John" is the skipper's name, too. Capt. John K. Borten, born in Norway, was about 15 when he arrived in the State of Oregon, and ever since then he has fished up and down both the Pacific and Atlantic coasts of the United States, with quite a bit of Gulf of Mexico fishing added for good measure.

Co-owners with "Halibut John" in the new trawler are Elwood C. Arback and Anthony B. Guth, both of Philadelphia. The *Halibut John* is documented out of Beaufort.

The *Halibut John* is of standard 55' Hatteras Trawler design, except for one particular. The owners have installed four fuel tanks of 800 gallons each, which will allow the boat to be fished steadily for weeks at a time.

The new trawler is powered with a 6-71 General Motors 165 hp. Diesel, with 3.75:1 reduction gear. Other equipment includes 76-B Apelco radiotelephone, Bendix DR-15 depth sounder, Onan light plant, Surrette batteries, Jabsco pumps, and Model 515½T Stroudsburg hoist.

Fisheries Association Meets at Washington

Speaking at the North Carolina Fisheries Assoc. meeting last month at Washington, N. C., were G. B. Talbot, Dr. A. F. Chestnut, William H. Potter, all of Carteret County; John Rodman, Washington attorney; and Congressman Herbert Bonner, Washington.

Mr. Talbot, head of the Fish & Wildlife Laboratory, Beaufort, reviewed the research to be done on the striped bass in North Carolina.

Dr. Chestnut, who was made an honorary member of the group, commented on the committee recently formed to study the blue crab industry. Clyde Potter of Belhaven is a member of that committee.

Sterling Harris, well-known packer of crab meat at Belhaven and in South Carolina, said the 35% increase in the production of crab meat in the Chesapeake area during the past 15 years, and the 700% increase in the southern areas in that time, faces a reversal because of the fewer crabs available for packing.

Sam McCotter, Vandemere, commented on the oyster industry. He said there are no oyster houses in Pamlico County now, and there used to be 12. He recommended that all oystering grounds be closed for three years to allow oysters to recover their former abundance. Dr. Chestnut said a management program is needed.

Chestnut Named Fisheries Institute Director

Dr. A. F. Chestnut has been named director of the University of North Carolina's Institute of Fisheries Research, located in Morehead City. A member of the staff since 1948, Dr. Chestnut succeeds Dr. Austin B. Williams.

Good Menhaden Season Closes

One of the biggest menhaden seasons was coming to a close late last month, and the menhaden boats which steamed into Beaufort and Morehead City from Virginia and other out-of-State ports were beginning to leave.

Three Quinn boats, the *Morris, Quinn* and *Harrington*, were on their way to Fernandina, Fla., and one boat, under contract to Beaufort Fisheries, the *John O.*, was planning to leave for the North.

Virginia Oystermen Want Tonging Season Extended

The Oystermen's Benefit Association of Lancaster County last month went on record as favoring three proposals presented at the meeting. The Association will ask the Commission of Fisheries to extend the patent tong season on the Rappahannock River through January.

The Association also proposed to seek passage of a law permitting patent tonging in the waters of the Rappahannock River above Towles Point. They went on record in favor of the proposed Salem Church Dam on the Rappahannock River above Fredericksburg.

Officers elected were: A. R. Henderson, chairman of the Association; and B. T. Chilton of White Stone, vice-chairman.

Oystermen Doing Well in Pocomoke Sound

Oystering began in earnest in Pocomoke Sound last month. According to reports, Tangier tongers were taking from 20 to 30 bushels a day in the Sound and selling them to the Tangier markets for $4.00 a bushel and to the Crisfield markets for $4.50 a bushel. If the oysters hold out, it is reported, the tongers will make more money this season than in any other for the past ten years.

Good Crab Catches

During December the catch of crabs in the lower Chesapeake was very good, but the price per barrel for hard crabs was not too high. At first they started out at $5.00 a barrel, but later in the month when the dredgers began to catch 40 to 50 barrels a day, the price dropped to $2.00.

Hampton Roads Area Landings

Trawler fishermen in the Hampton Roads area landed 1,882,900 pounds during December, or 73,200 pounds less than in the previous month. Scup landings were the largest, with 628,000 pounds, followed by croaker, sea trout and king whiting.

Pound net catches were very low again in December, with only 26,100 pounds being landed.

Fisherman's Review of the Boat Show

THE gigantic marine equipment exposition officially known as the National Motor Boat Show, took place January 13-22 at the Kingsbridge Armory in the Bronx, New York. It was the 46th such event, sponsored by the National Association of Engine & Boat Manufacturers, and provided exhibitors with a good opportunity to display new and improved products before a large audience. While the Show is, of course, aimed primarily at the pleasure boat owner, many of the items exhibited have application on commercial fishing boats. The following pages contain descriptions of some of this equipment and supplies.

New Gulf High Detergency Oil

Gulf Oil Corp. showed its newest marine product, Gulfpride Marine H.D. oil, which was developed to meet the lubrication requirements of all types of inboard engines, both gasoline and Diesel, under either fresh or salt water conditions. Gulfpride Marine H.D. is a high detergency oil, which is available in three natural viscosity grades, 20/20W, 30 and 40. It is claimed that it will minimize carbon formation and oil ring clogging, as well as protect engine parts from rusting.

Also on display were replicas of Gulf Marine White gasoline and Gulf Dieselect pumps. A Gulf-patented corrosion inhibitor has been added to Gulf Marine White gasoline, to end problems of corroded carburetors, fuel pumps and fuel tanks.

Ferdinand Polyseamseal in Four Colors

Polyseamseal, made by L. W. Ferdinand Co., Inc., is now available in white, mahogany, black or tan for use in hull or deck seams, as a bedding compound for fittings, double planking or batten seam compound. Flexible plastic tubes provide convenient handling and application of this product, avoiding waste and preserving the unused portion.

Polyseamseal is non-discoloring, non-oxidizing and unaffected by mold, bacteria, greases, oils, alkalis, acids or petroleum solvents. Its resilient or rubbery consistency is long lasting, flexing with expansion and contraction to maintain a permanent seal.

New midget Sperry Gyro-compass, designated as Mark 22.

This B. F. Goodrich Cutless rubber bearing is installed on an Inland Seas steel hull cruiser for State Conservation Service.

B. F. Goodrich Cutless Rubber Bearings

B. F. Goodrich Cutless rubber bearings for propeller shafts, distributed Nationally by Lucian Q. Moffitt, Inc., were displayed. A complete line of these bearings in sizes from ¾ inch to 11½ inch shaft size, are carried in warehouse stock.

Cutless bearings are made of oil-resistant rubber which is unaffected by sludges and waste chemicals found in waters where boats operate; the special rubber also resists wear and heat. Water-lubricated, the bearings repel gritty abrasive particles which damage bearings of other types.

Monel Fuel Tanks by International Nickel

"Seagoin' Monel in Tanks, Shafts, Fastenings and Accessories" was the theme of the International Nickel Company's exhibit. Special attention was focused on a display of welded Monel gasoline tanks for outboard motors. A corrosion-resistant, non-gum-forming Monel inboard fuel tank also was shown.

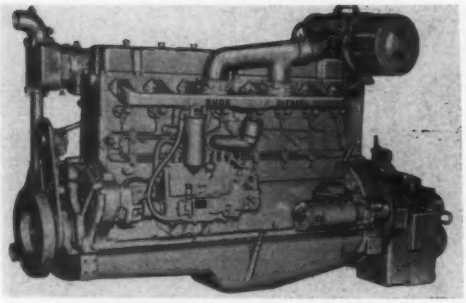
There was a display of Monel propeller shafts machined with the SAE standard filleted keyway, which eliminates sharp corners where cracks start and increases resistance to damage by floating debris.

An accessories display featured a heat and sea-water resistant marine silencer, manufactured by Maxim Silencer Co.; a two-burner Monel stove, made by Perkins Marine Lamp and Hardware Corp.; a Wix Kuler engine heat exchanger, made by Western Blower Co.; and a Monel exhaust sweep, manufactured by Weldon Manifold Co. Also shown was the latest in Monel pumps, pails, filters, fuel lines, tubing, boat pole hooks, antenna and mast fittings.

New Miniature Sperry Gyro-Compass

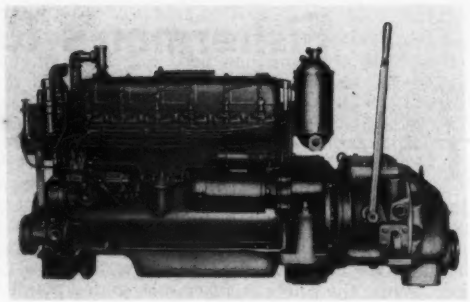
The Mark 22, a revolutionary new miniature gyrocompass designed and developed for use in Navy landing craft, was demonstrated by Sperry Gyroscope Co. Visitors were able to see Mark 22 hold fast to its bearing despite buffeting similar to that experienced during rugged Navy tests. The accuracy of Mark 22, approaching that of standard gyro-compasses many times larger and heavier, was proved during Navy tests which were conducted in extremely bad weather.

A boat-like platform and simulated sea and weather



Left: Model 8DATMR-1125 Buda Turbo-charged marine Diesel which develops 300 shaft horsepower at 1900 rpm.

Right: Red Wing's 6-cylinder, 100 hp. marine Diesel, with displacement of 302 cubic inches.



conditions enabled visitors to match their manual steering ability with the automatic quality of the Sperry Magnetic Compass Pilot. Another Sperry product, the Lever Pilot, is designed to provide accurate, sensitive steering of both automatic and manual phases on vessels traversing inland and coastal waterways.

Buda Diesels and Generator Sets

Buda Division, Allis-Chalmers Manufacturing Co., exhibited three marine engines, including the Model 8DATMR-1125 turbocharged Diesel, which develops 300 shaft horsepower at 1900 rpm., and is well suited to fishing boats. The Model 6DAMR-273 Diesel, a six-cylinder engine that weighs approximately a thousand pounds complete with marine gear, is designed for boats in sizes up to 60' in length.

Buda also displayed its Model 6DASMR-844 Diesel, a heavy-duty lightweight engine with six cylinders and maximum horsepower of 280. The Buda Model BDM-6, 6 kw., marine-type Diesel electric generator set is one of many models available in sizes 5 to 300 kw.

American Brass Shows Sealtite Wiring Conduit

Products exhibited by the American Metal Hose Division of American Brass Co. included Sealtite electrical wiring conduit, seamless bronze tubing for air and fuel lines, and flexible bronze hose for wet exhaust piping. The firm's Sealtite Type U. A. is reported to be the first liquid-tight, flexible conduit to be approved by Underwriters' Laboratories for use in wet spots.

Sealtite wiring conduit.

A 700-pound Tobin Bronze shaft, keyed and filleted according to the latest SAE standard marine propeller shaft end dimensions, also was included in the American Brass Co. exhibit, as were Tobin Bronze shafts in graduated sizes up to 5" in diameter. Tempaloy, a corrosion-resistant aluminum bronze shafting alloy, also was exhibited.

Everdur, the original copper-silicon alloy group, was shown in form of corrosion-resistant marine hardware.

New Pettit Paint Colors

Two new paint colors for 1956, Tahiti Coral and Pink Cloud, were shown by Pettit Paint Co., manufacturers of marine paints, varnishes and marine specialties since 1861. Pettit now has more than 30 different colors in the Shipendec and small boat lines. Some of the recent ones are: Newport Green, Bikini Blue, Dutch Cream, Flame Coral, Blue Ice, Bahama Blue, and many others.

New Red Wing 150 hp. Gasoline Engine

Red Wing Marine introduced their new Meteor "150", a fast, lightweight engine developing 150 hp. at 3200 rpm. The engine has massive seven bearing counter balanced crankshaft, full pressure lubrication and a specially-designed exhaust manifold with ¼" water jacket wall that insures long service in salt water operations.

The Red Wing Arrowhead series of engines are all heavy duty, medium speed types, featuring large piston displacement and the ability to turn large propellers. The Arrowhead power range is from 10 to 100 hp.

The leader in the Red Wing Diesel line is the D4-45, which develops 45 hp. at 2400 rpm. and weighs only 825 lbs., direct drive. The engine has a counterbalanced crankshaft, American Bosch fuel injection system, specially designed combustion chamber that eliminates all objectionable exhaust smoking and Diesel odors, and complete fresh water cooling system.

Red Wing's D6-100 model develops 100 hp. at 2600 rpm., and can be had in twin screw pairs with hydraulic or manual reverse gears, and with various ratios of reduction. Also in the Red Wing Diesel line are the D6-140, D6-160, and D6-200, which develop 140, 160, and 200 hp. respectively.

Onan Marine Electric Generating Plants

Two marine electric generating plants were shown by D. W. Onan & Sons Inc., including a gasoline driven, water cooled model in the 3,000-watt range, and a Diesel driven, water cooled plant of 3,000 watts capacity. A variable speed Onan generator and control package also was exhibited. This compact, easy-to-install generator and control charges 32-volt, 16-cell lead batteries regardless of variations in driven speed within the range of 1,000 and 3,000 rpm.

Jabsco Self-Priming Marine Engine Pumps

Jabsco Pump Co. had a display of special self-priming marine engine pumps, foot and flange mounted models for raw water cooling. Also shown was their standard line of Jabsco self-priming rotary pumps with neoprene impeller in bronze construction, both plain and ball bearing models, sizes ⅛" to 2½" ports with capacities 2 to 135 gpm. Mechanical and manually-operated demonstration units showed operating functions of various models.

New Fuel System for P&H Marine Diesels

An entirely new and greatly simplified fuel system, designed around the Roosa-Master pump, is now standard equipment on all P&H marine Diesels, which are offered in sizes from 30 to 255 horsepower. Manufactured by P&H Diesel Engine Div., Harnischfeger Corp., these engines have new, flexible mounts, especially designed to minimize vibration. Electric generating sets up to 100 kw. also are available in the P&H line.

For easier starting, the new P&H fuel system automatically retards injection until engine speeds reach 500 rpm. Injection is then gradually advanced, matching the increased operating speeds and providing fine idling charac-

teristics, faster acceleration and deceleration, quicker engine response and overall smoother operation. The new fuel system does away with a total of 131 separate parts, and is 49.5 lbs. lighter in weight.

P&H marine Diesels are of modern 2-cycle design, and are exceptionally light in weight and compact in size as related to horsepower. A highly serviceable feature is their "Unitized" power assembly, which makes it possible to replace an entire cylinder assembly (or each component)—consisting of head, liner, pistons and rod, as a single easy-to-handle unit.

Hercules Has Lightweight Marine Diesels

Hercules Motors Corp. featured their Model DIX6ES, a lightweight 150 hp. marine Diesel, which was suspended in mid-air by four small lines. This engine develops its rated horsepower at 3,000 rpm., and weighs only 1490 lbs. Also featured was the Hercules 8-cylinder, Model DNX-V8 marine Diesel, which develops 500 hp.

Hercules marine Diesels with 3⅞" bore and 4" stroke include the Model DIX4E, rated 75 hp. at 3000 rpm., and weighing 890 lbs., as well as the Model DIX4ES, developing 95 hp. at 3000 rpm., with weight of 990 lbs. Both of these engines have 180 cu. in. piston displacement.

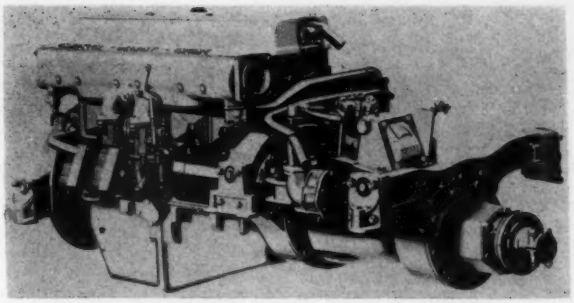
The Hercules Model DIX6E is a 6-cylinder engine, and also has 3⅞" bore with 4" stroke. Piston displacement is 283 cu. in., and this Diesel is rated 115 hp. at 3000 rpm. Another six-cylinder Hercules Diesel is the Model DFXH, with 5¾" bore and 6" stroke. This engine has 935 cu. in. piston displacement, and develops 260 hp. at 2100 rpm.

New Twin Disc Gear for High-Speed Engines

The new Twin Disc Model MG-511 marine gear is designed for high-speed, high-horsepower engines. For power plants up to 240 hp. at 2100 rpm., the MG-511 has a unique arrangement of five carburized, hardened and ground helical gears, straddle mounted on short rigid shafts—plus hydraulically actuated clutches—which permit its unusually short 17⅞" length from the SAE housing flange to the output propeller shaft flange. Fast response is provided through finger-tip control.

Anti-friction bearings and SAE involute splines are used throughout the MG-511, and input to the marine gear is through a rubber block drive. It is claimed that this drive will withstand normal misalignment conditions, without imposing undue loads and stresses on the marine gear input shaft or the engine crankshaft.

Smooth engagement and disengagement of the forward and reverse clutches of the MG-511 gear is accomplished through a differential mechanism in the selector valve, which permits a steady rise of actuating oil pressure from 30 psi. to the maximum of 140 psi. in smooth, even increments—in only ¾ to 1½ seconds. A trolling valve—an optional accessory—is available. The mechanism allows the clutch to slip, permitting slow propeller speeds.



Chrysler Crown Special, rated 135 hp. at 3600 rpm.

Chrysler Line Includes Three V-8 Engines

Chrysler is offering for 1956 the Imperial V.250, an 8-cylinder marine engine rated at 250 hp. Twin four-barreled downdraft carburetors, a specially-designed "full race" camshaft, and a unique "opened up" design, deep-breathing manifold help this engine attain high-speed performance. Two compression ratios, 8.2 and 7.2 to 1 are available.

The Imperial V.250 has 331 cubic inch displacement and utilizes the Chrysler hemispherical-design combustion chamber. Other Chrysler V-8 engines include the 200 hp. Imperial V-Special, and the Royal V-Special (M-44S), rated 150 hp. at 3800 rpm. These engines have as standard equipment such premium items as hardened crankshaft, tri-metal bearings, all-gear driven accessories, positive displacement water pump and mechanical tappets.

Five other engines comprise the Chrysler line, including the Ace, rated 95 hp. at 3200 rpm.; the Ace Special, developing 110 hp. at 3600 rpm.; the Crown, 125 hp. at 3600 rpm.; Crown Special, 135 hp. at 3600 rpm.; and the Majestic, 160 hp. at 3000 rpm.

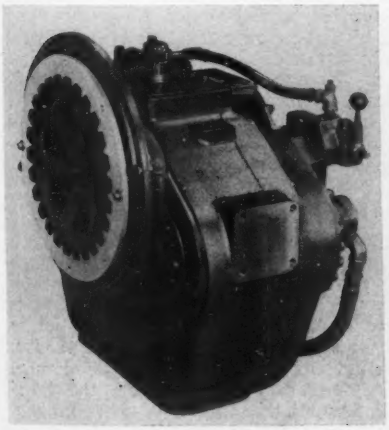
Edo Radar for Small Boats

The new Edo radar brings the safety and economy of radar navigation within the means of owners of small boats with limited space and generator capacity. The radar has exclusive, patented, slotted waveguide antenna, four feet in length, which reduces side lobe reflections.

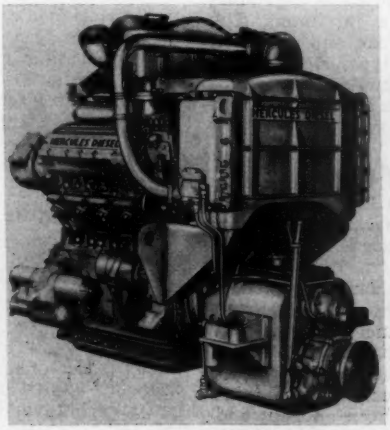
Edo radar provides clear, precise definition of shore line, buoys, boats or other hazards on five scales—1, 2, 5, 10 or 20 miles—and shows objects as close as 25 yards. Power input into the equipment is 375 watts.

Edo also offers a new low-cost direct-reading Loran. The lowered cost was achieved through use of advanced electronic circuitry, which has resulted in a single-unit equipment with only 28 tubes.

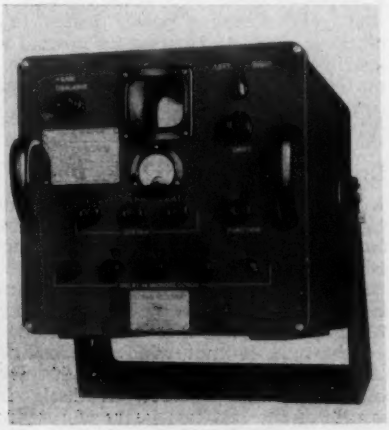
The Loran uses the ship's regular radiotelephone antenna, and power requirements are 200 watts at 117 volts,



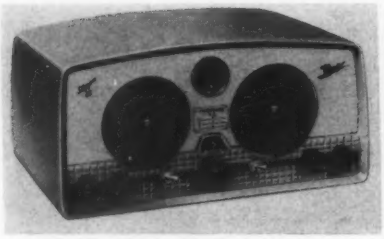
Twin Disc MG-511 gear.



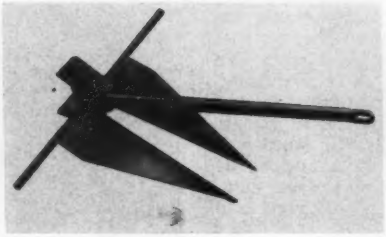
Hercules 8-cylinder, 500 hp. Diesel.



Edo Loran.



45-watt Bendix "Skipper" telephone.



Danforth anchor.

Wilfrid White automatic pilot.

60 cps. Operation of the equipment is claimed to be extremely simple and requires no training of any kind.

Other Edo equipment includes the Model 185 deep depth sounder, which records and indicates depths from zero to 6,000 fathoms; the Edo Fishscope, an electronic fish-finding device which magnifies the view of schooled fish 25 times for better identification and evaluation, and is available in three versions for deep and shallow water fishing; a precision survey depth recorder for accurate depth measurements up to 250 fathoms.

Snow-Nabstedt air operated reverse gear, which transmits 540 hp. at 1000 rpm.

Snow-Nabstedt Reverse and Reduction Gears

The Snow-Nabstedt Gear Corp., makers of Joes and S-N gears, displayed some of their hydraulically-actuated and air-operated reverse and reduction marine transmissions up to 1000 hp. A new, versatile lever control for the air-operated units was shown. This simplified control is designed as a package unit to convert from "push-button" operation to lever control.

Hydraulically-actuated gears designed for inexpensive "finger-tip" controls, which give instant response with practically no effort, were exhibited. They transmit engine power directly from the forward clutch to the reduction gear, keeping power losses to a minimum. The clutches are self-adjusting for normal wear, and reduction gearing is a heavy-duty herringbone type, rigidly supported in its own housing. Various reduction gear ratios can be supplied for both right and left-hand propeller rotation.

Danforth Has Wide Selection of Anchors

Danforth Standard anchors are made in all sizes from 2½ to 21,000 lbs.; Hi-Tensile anchors are available in sizes from 5 to 90 lbs.; and the Shearpin anchor is made in the 4-lb. size only.

According to the new edition of "Anchors and Anchoring", distributed free by Danforth Anchors, 2137 Allston Way, Berkeley, Calif., anchor load increases in cold weather. A 40-knot wind, for instance, has 12% more pressure at 30-degrees than at 90-degrees, which affects anchoring. The booklet, available free, also contains results of the last two years of research on anchors and anchoring.

New Wilfrid White Automatic Pilot

Wilfrid O. White & Sons, Inc. featured their new automatic pilot actually mounted on a boat model, turning the boat automatically to any new course set by the compass course selector, or the remote maneuvering control. This automatic pilot is designed and priced for the small boat, and is suitable for craft up to 55 feet. It operates on 6-12-32 volts DC.

The steering motor unit contains a heavy-duty motor and gear system which transmits the power through chain and sprockets to the boat's steering wheel shaft. This is a non-hunting system, which means that the motor does not have to keep working all the time. Limit switches prevent over-travel of the rudder under any conditions.

The White automatic pilot can be put into operation regardless of speed, direction or rudder position, and is independent of normal voltage variations from the boat's electrical system. Current consumption is approximately 40 watts during period when steering motor is energized.

Also featured in the Wilfrid O. White & Sons exhibit were the Corsair, Express and other Constellation-type spherical compasses, and the SurEcho and White echo depth sounders.

Five New Bendix "Skipper" Radiotelephones

Bendix Marine has announced five completely new, attractively-designed "Skipper" marine radiotelephones. These phones are made from entirely new circuitry designs providing improved sensitivity, selectivity and noise limiting. With increased power ranges—28, 45, 70, 140 and 250 watts—the lower powered units have six channels and the higher ones, eight.

An outstanding feature of the new Bendix radiotelephones is the illuminated channel indicator. Provision has been made in the telephones for installation of remote channel switching, and overall design complies with all present and impending FCC regulations.

While frequency coverage is from 2,000 to 6,000 kc., higher frequencies are available. The radiotelephones will operate on all ship voltages.

Bendix also has a new Radio Navigator, which is compact in size, low in price, and designed for permanent installation. One of its outstanding features is quick and accurate tuning by push buttons on all bands.

The Navigator gives sharp and accurate indication, having a flat type antenna, rising less than 2" above the top of the housing surface. As standard equipment and mounted with the case is a null meter. The Bendix direction finder may be powered by either 6 or 12 volts.

Sudbury Engine Alarm

Sudbury Laboratory has a new Engine Alarm, which gives a combined buzzer and red visual signal to warn when something is wrong and needs immediate attention. When the ignition key is turned on, the alarm will buzz and the "Oil" section of the panel is illuminated; when the engine is started and the oil gauge indicates pressure, the oil indicator goes out and the buzzing stops. This also offers an additional safeguard against leaving the ignition switch turned on when the engine is not running.

(Continued on opposite page)

The oil monitor is set to give an alarm also when the pressure drops below 5 pounds.

If the temperature of an engine goes over 200 degrees Fahrenheit due to a faulty water pump or clogged system, the "Temp" section of the panel is illuminated and the buzzer will sound. If, when the ignition switch is turned on, the "Temp" light is illuminated, it indicates that the engine is too hot to start and should be cooled off before starting or putting water in the cooling system.

Socony Cruising Guides Revised

Socony Mobil has completely revised its free cruising guides to United States waterways. The new guides show radio beacon systems and sketches of lighthouses in color, and provide information on radiotelephone weather reports, storm signals and mileage distances between ports.

There are four of the guides: (1) from Eastport, Maine, to Barnegat Inlet, N. J. (including Long Island Sound); (2) from Sandy Hook, N. J., to Jacksonville, Fla., (including Delaware and Chesapeake Bays and the Ohio River); (3) New York Waterways, the Great Lakes and the Mississippi River, and (4) the Pacific Coast from Puget Sound to San Diego, Calif.

Socony Mobil has added a rust inhibitor to its Mobiloil outboard. The new oil is claimed to cut corrosion, increase spark plug life and reduce rust in engine parts and fuel tanks effectively.

Universal's Lightweight Diesel Generating Sets

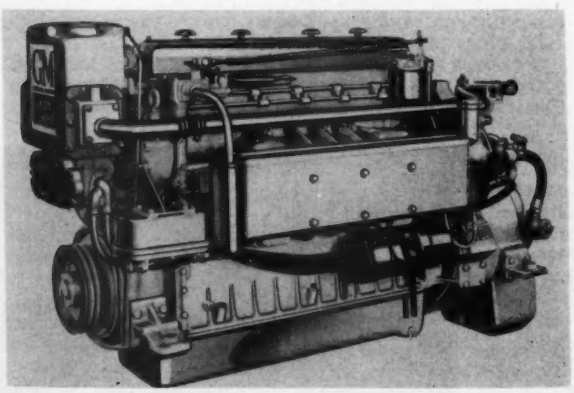
Universal Motor Co. introduced a new series of lightweight, large-capacity generating sets. The new models are powered by four-cycle full Diesel engines of six cylinders, and are directly coupled to generators turning at 1800 rpm.

This is a companion series to the recently announced Universal line of Diesel generators offered in 1200 rpm. speed. The new 1800 models are produced in 10, 15, 25 and 35 kw., and can be furnished with various controls to meet different job requirements.

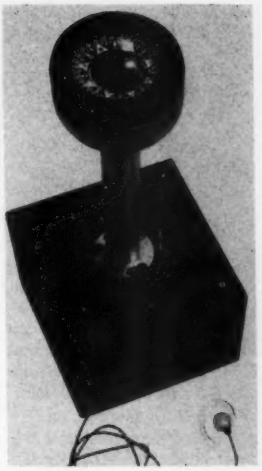
New Woolsey Tube Colorant Paint System

A new tube colorant system, which gives boatowners a heretofore unobtainable range of true marine colors for their craft, has been announced by C. A. Woolsey Paint & Color Co., Inc. Simple to use, Woolsey's new Cawlux Nauticolor system requires only one tube of liquid marine colorant added to a single can of ready-mixed marine finish. An array of 70 colors, which can be mixed evenly and rapidly, are offered.

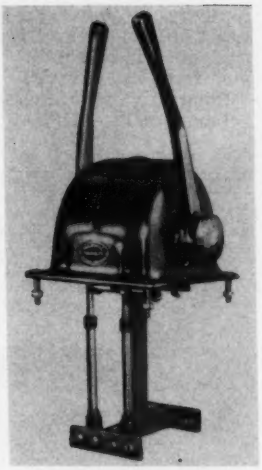
Woolsey's new Nauticolors are claimed to have all the fade resistance and gloss retaining characteristics of factory ready-mixed shades. Once applied, the Nauticolor paints will not check or change under the most severe exposure to the elements.



General Motors new 235 shp. vertical Diesel of the "71" Series, which has light weight due to liberal use of aluminum alloys.



Maxim direction finder.



Marmac Diesel control.

Maxim Radoc Portable Direction Finder

The Maxim Silencer Co. has an entirely new portable radio piloting instrument, the Radoc. It combines, reportedly for the first time, a completely modern, self-contained portable radio direction finder with a high quality magnetic sighting compass. The manufacturers claim that in a matter of seconds and without any calculations, the operator can get his radio beacon bearings directly on the sighting compass.

Because it is really portable, the Maxim Radoc allows the navigator or pilot to take a position on the boat which is free from magnetic deviation and far enough from the engine to eliminate the interference of ignition noise. The new instrument serves four purposes: as a complete direct-reading portable radio bearing finder; as a magnetic sighting compass for taking bearings in good visibility; as a spare steering compass; and as a telltale compass below decks.

New Marmac Heavy-Duty Diesel Control

Marmac Products, manufacturers of marine engine controls and steering gears, has announced a new heavy-duty control designed to be used on large work boats. Any type Diesel can be readily handled, as the direction of cable travel can be reversed on the control head. A convenient feature is the fact that on the throttle lever side there is a large outside tension adjustment for holding the governor lever in position when set.

The control employs a new and larger heavy-duty trulay push-pull cable having a capacity of approximately five times greater than cables used on standard controls. Marmac controls are adapted for use where long cable lengths are required.

New Lightweight General Motors Diesel

A new General Motors Diesel which weighs less than ten pounds per horsepower was featured by the company's Detroit Diesel Engine Division. The new model is a six-cylinder vertical unit in the "71" series, which develops up to 235 shaft horsepower at 2300 rpm. Its low weight-to-horsepower ratio is attained through liberal use of aluminum alloys in addition to its two-cycle design. Four-cylinder and twin-six veritcal aluminum models also have been added to the General Motors "Series 71" line.

Representing the General Motors "Series 71" inclined aluminum alloy models, which have block and head tilted 70 degrees off vertical to reduce installation height, was a matched pair of four-cylinder engines. Each unit develops 151 hp. at 2300 engine rpm.

General Motors' compact, heavy-duty Diesel, the "6-110", has a continuous rating of 220 shaft horsepower

for large fishing craft. Performance of the General Motors "4-51" valveless Diesel, rated at 87 shaft horsepower, is claimed to be equal to that of the average gasoline engine rated at 115 hp.

Completing the General Motors exhibit was a motorized cutaway model of a GM "3-71" Diesel.

Bludworth's Indicating Depthometer ES-121 B, designed for small boats. The instrument automatically measures and indicates depths from 2 to 200 feet.

Bludworth Marine Electronic Equipment

Products displayed by Bludworth Marine included their "Kingfisher" depth sounder, which combines a supersensitive echo recorder with echo vision. Other Bludworth Depthometers include the ES-121 B lightweight, compact instrument engineered for smaller boats, and having ranges from 2 to 200 feet. Depths can be read in feet or fractions of a foot even in bright sunlight.

The Bludworth "Communicator" BRT-1025 radiotelephone with four transmitting and receiving channels and tunable broadcast receiver was offered with improved design and at a lower price. Bludworth's "Port Pilot" portable, self-contained direction finder, which has been reduced in price, is suited to use on small and medium-sized craft. The latest Model DF-30 A, which can be placed anywhere in the boat, has been redesigned so that it is smaller on the outside and has larger space for batteries.

The Bludworth Marine Mari-Guide direction finder with inside loop, Model DF-1029 A, has the exclusive "Nuldikator" type of meter presentation. An outside loop version, Model DF-1030A, gives greater flexibility of installation.

Three New Palmer Marine Engines

Palmer Engine Co. showed a companion model to its 6-cylinder, 240 cubic inch, 115 hp., overhead valve engine, based on the International Harvester Silver Diamond truck engine. The new engine, also a 6-cylinder with International Harvester block, has a greater displacement (264 cubic inches), while retaining the identical dimensions of its companion. It develops 125 hp. at 3400 rpm.

Another completely new 6-cylinder, International Harvester, overhead valve engine, known as Model "308", has been added to the Palmer line. It has heavy duty truck features, such as oversize counterbalanced crankshaft, stellite faced overhead valves with rotators, all around cylinder jacketing, plus a very favorable weight-power ratio. The "308" develops 145 hp. at 3400 rpm.

Palmer exhibited a redesign of its 60 hp. at 3200 rpm. PH-45, now to be known as Model "134". It features a considerable reduction in weight and is nearly four inches shorter due to a new clutch and crankcase design.

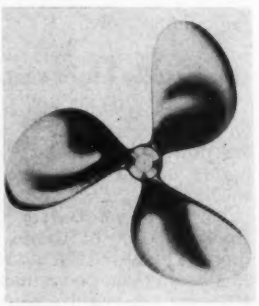
Other Palmer engines include the "339" and "404", based on Hercules blocks, and rated 145 and 165 hp. respectively at 3200 rpm.

New Marprox Sealing Compound

Two new products, Sealer 800 Mahogany and Sealer Solvent, have been announced by Marine Products, Inc., manufacturers of the Marprox line of synthetic rubber compounds. Sealer 800 Mahogany has been developed to provide a perfect match for seams, and for bedding windows, ports, and cabin structures with varnished mahogany finishes.

Sealer Solvent can be used for removing sealing compounds from hands and tools, and is expected to find many uses in boat construction and repairs as a clean-up before painting or varnishing.

New Michigan High-Speed Propeller



Michigan "Scimitar" propeller.

Michigan Wheel Co. has added a new 3-blade propeller known as the "Scimitar" to its line of inboard propellers. This wheel is designed to provide the maximum of speed, and is particularly suited to boats equipped with powerful, high-speed engines.

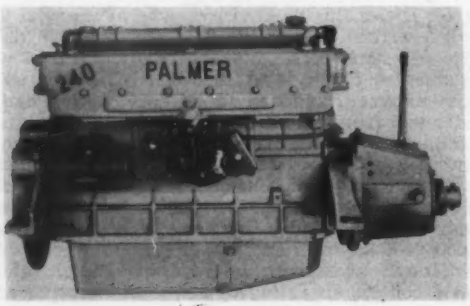
Scimitar wheels are available in diameters of 9 inches through 32 inches, cast from a special alloy known as Michalloy-K, which has a very high tensile strength and is exceptionally resistant to corrosion and electrolysis. For severe conditions where extreme propeller loading occurs, the Scimitar is available in a super alloy known as Michalloy-XX.

New Small, Lightweight Gray Diesel

The newest addition to Gray Marine Motor Company's expanding Diesel series is the compact 129 cu. in., Four-D129, rated 25 hp. at 2000 rpm., and weighing only 656 pounds with reduction gear. This engine has design and general appearance similar to that of the lightweight 100 hp. Graymarine Diesel Six-D427. The improved design also is repeated in the 135 hp. Graymarine Diesel Six-D572.

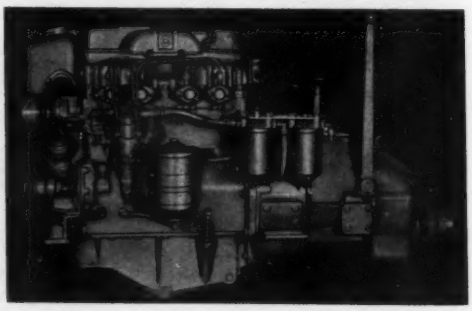
All Graymarine Diesels are four-cycle type, and are equipped with the Gray fresh water cooling system. The six-cylinder Graymarine Diesels feature the use of aluminum wherever possible to reduce deadweight.

Two new Graymarine gasoline engines are the 70 hp. "Model 70" and the 120 hp. single carburetor "Model 120". The "Model 120" is a companion engine to the dual-

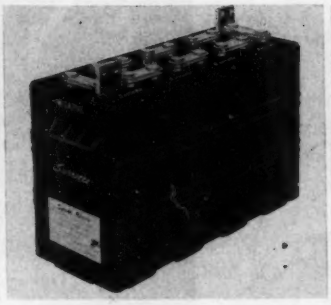


Left: Palmer Model "240" engine, developing 115 hp. at 3200 rpm. It is based on the International Harvester Silver Diamond engine.

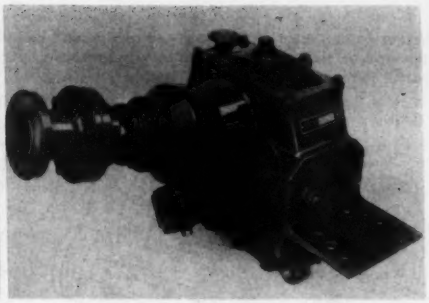
Right: New Graymarine Diesel Four-D129, which turns up 25 hp. at 2000 rpm.



100-watt Radiomarine Golden Herald telephone.



New Type GTNS Surrette battery.



Walter V-Drive.

carburetor "Model 135", and both are 244 cu. in. engines.

For big, all-purpose "sixes", Gray lists the 363 cu. in. Model 165 and 175, and 427 cu. in. Model 185 and 200, all four turning their maximum horsepower (indicated by their model numbers), at 3400 rpm.

A six-cylinder heavy-duty engine of 330 cubic inch piston displacement is supplied to Alaskan salmon fleets, equipped with 2:1 reduction gear. For smaller work boats, Gray offers the Four-162, a four-cylinder engine of 162 cu. in. with continuous 42 hp. rating.

New Radiomarine Golden Sentry Telephone

The Radiomarine Corporation of America featured its new "Golden Series" equipment, including a combination portable radio direction finder, marine radiotelephone receiver and broadcast receiver, known as "The Golden Guide"; a 100-watt radiotelephone, "The Golden Herald"; a 35-watt radiotelephone, "The Golden Courier"; and a 20-watt, 5-channel radiotelephone, "The Golden Sentry", which was introduced for the first time.

Radiomarine exhibited its compact, economical radar, Model CR-105A, designed for fishing craft on which space and power supply are limited. The indicator can be set on 1-2-4-12-32 mile ranges, and has a minimum range of 50 yards.

Radiomarine Loran, Model LR-8803, is especially suitable for installation aboard fishing craft. It features a large direct-reading time difference dial, and the indicator weighs less than 45 pounds.

Other Radiomarine equipment includes an eleven-channel radiotelephone, Model ET-8050; a three-range depth recorder, the Echograph; a two-channel radiotelephone receiver, Model AR 8514; and a portable three-band radio-receiver with a telescoping antenna for short wave.

New Surrette Marine Batteries

Surrette Battery Co. exhibited a new line of Type GTNS high batteries with triple insulation, which they claim are the most foolproof and dependable battery they ever have made. Some of the first of these batteries, made experimentally in 1945, are still in service.

The new batteries have Surrette's special Rezistox plates, edges of which are completely sealed with polyethylene, while the bottom of the plates is encased in rubber. The batteries are available in capacity of up to 500 ampere hours, in 2, 3, and 4 cell units. They can be assembled in series for 32 or 110 volt operation.

The Surrette exhibit also included cutaways to show battery construction, and featured the "Electro-Pac" for electrically-started outboards, which consists of a lightweight battery and plastic Fiberglas reinforced container with carrying handles. Total weight of the "Electro-Pac" is 26 lbs., and it is rust-proof, acid-proof and impervious to salt spray.

Also available with the "Electro-Pac" is a new portable charger with carrying handles, which cuts back to trickle charge automatically after the battery reaches full charge. It weighs but 9 pounds.

Other Surrette products include a complete line of marine shore converters.

Walter V-Drives Provide Compact Installation

The Walter V-Drive makes it possible to install an engine in the extreme aft end of the boat—providing more cargo space on work boats. It makes the installation of a marine engine in a small boat more practical, especially those built for outboard power.

With the Walter V-Drive, the engine compartment becomes a very compact unit and can be bulkheaded from the rest of the boat, reducing engine noise and increasing safety. The V-Drive is very quiet in operation, because of its helical gears made of fine alloy steel, specially finished and heat treated. It is available in various ratios and sizes.

The Walter Machine Co. also manufactures reduction gears, transfer drives, Clean-Flo keel coolers, and propeller pullers.

Raytheon Introduces "Moto-Larm"

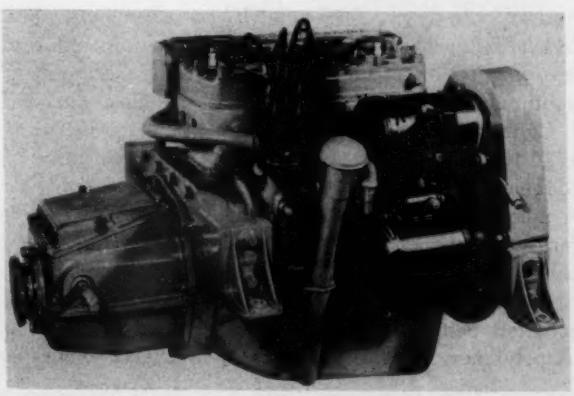
An "automatic electric watchdog" that sets up a loud warning to the operators of marine craft whenever their engines start misbehaving, has been developed by Raytheon Manufacturing Co. The device, called a "Moto-Larm", is relatively simple to install, and consists of a small panel containing two red lights and a warning buzzer. The panel may be mounted in the cockpit, on the bridge, or on any part of the vessel. The lights flash and the signal sounds whenever the engine temperature exceeds a safe limit, or the oil pressure drops below a safe minimum.

Other products in the Raytheon marine electronics line include complete radar systems for commercial ships, sonar and depth-sounding apparatus, and a highly efficient gas fumes detector no bigger than a man's fist.

New Chris-Craft 200 hp. Marine Engine

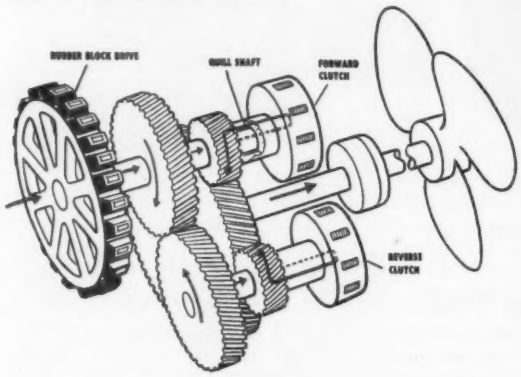
The powerful new 200 hp. Chris-Craft Model "WB" engine is designed for commercial applications. Maximum horsepower is attained at only 3200 rpm., and reductions of 1.5:1, 2:1 and 2.5:1 are offered.

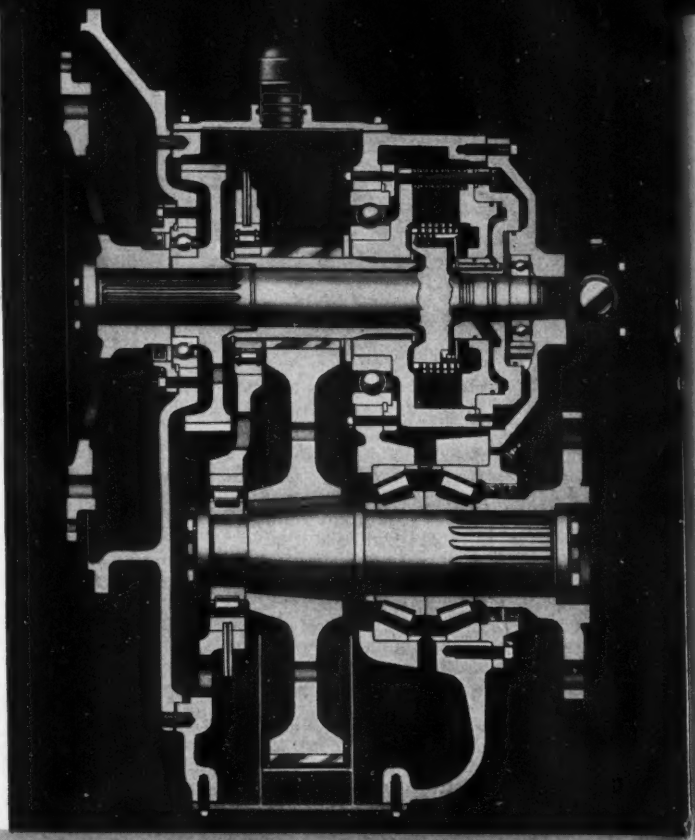
The Chris-Craft line also includes a low-priced Model



Chris-Craft's 60 hp. Model "A" engine measures less than 32" over-all.

Unique arrangement of five hardened and ground helical gears, straddle mounted on short rigid shafts, plus two hydraulically actuated clutches permit the unusually short 17⅞" length.





NEW! MG-511

Marine Reverse and Reduction Gear

For today's high speed, high horsepower marine engines, Twin Disc has spent three years of research, design and testing to develop a marine gear that is compact, smoother and faster on response, and easier to service. The new MG-511 is the answer to marine power transmission for engines up to 240 continuous hp at 2100 rpm.

Compact? The MG-511 is only 17⅞" from the SAE housing flange to the output propeller shaft flange! A unique arrangement of five carburized, hardened and ground helical gears, straddle mounted on short rigid shafts, plus two hydraulically actuated clutches permit this extremely short length. All gears in the MG-511 are mounted on antifriction bearings to reduce power waste. A rubber block drive is used to transmit power to the gear. The tough, time-tested rubber block drive withstands normal misalignment conditions without imposing undue loads or stresses on the marine gear input shaft or the engine crankshaft.

An oversize 10 gpm pump, driven by the marine gear reverse shaft, is used not only to actuate clutches – but also to pump oil into the heart of each clutch. This flood of oil carries away heat, assures smooth clutch engagements and substantially reduces clutch plate wear. Oil is also pumped to provide forced feed lubrication of meshing gears.

One of the outstanding features of the new MG-511 is the smooth engagement and disengagement of the forward and reverse clutches. This is accomplished through a differential mechanism in the selector valve, which permits a steady rise of actuating oil pressure from 30 psi to the maximum of 140 psi in smooth, even increments – in only one second. Further smoothness is also assured because of the flooded-in-oil plate stack. Forward, neutral and reverse are controlled by the selector valve.

Servicing the new Twin Disc MG-511 is an easy job because the clutches are located at the extreme

after end of the gear. Simply remove the cover plate cap screws, and the clutch driving plates are accessible for easy and speedy replacement, without need of disassembling the gear from the engine. The pump is serviced just as easily, as it plugs into the reverse shaft and is held in place by only four cap screws. Adequate inspection plates are provided to permit servicing other components.

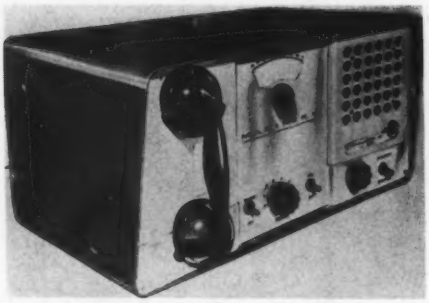
The MG-511 is designed for full horsepower operation continuously in both forward and reverse output shaft rotations. This makes the gear ideally suited for twin-engine installations of right hand engines—or it can be adapted for left-hand engines by merely changing the oil pump.

With all these features — backed by Twin Disc's more than twenty years experience in building marine gears — the new Twin Disc Model MG-511 provides the answer to the marine industry's power transmission problems.

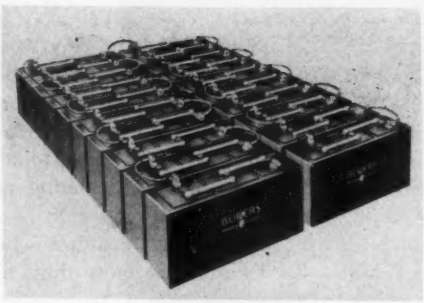
- **Ratios: 4.4:1, 3:1 or 2:1.**
- **Unusually short—17⅞" length.**
- **Rubber Block Drive.**
- **Finger-Tip Control.**
- **Oil-Actuated, Oil-Cooled, Multiple Plate Clutches.**
- **All components easily accessible for servicing.**
- **Full hp operation in both forward and reverse.**
- **All gears straddle-mounted on anti-friction bearings.**

TWIN DISC CLUTCH COMPANY • RACINE, WISCONSIN

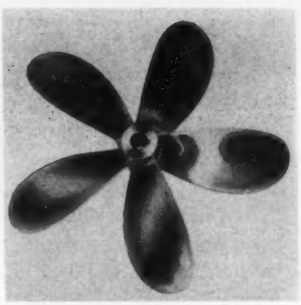
Hydraulic Division, Rockford, Illinois



Hudson American Mariner IV telephone.



Type MLL, 120-volt Bowers batteries.



Columbian 5-blade propeller.

"A", direct drive 60 hp. engine, and there is a Model "B" of the same rating which is available with reductions of 2:1 and 3:1, in addition to direct drive. Both Model "A" and "B" direct drive engines measure less than 32" overall and weigh only 456 lbs.

A 95 hp. Chris-Craft "K" and a 105 "KL" are offered where powerful engines that are compact and light, are needed. Reductions of 1.5:1 and 2:1 are available.

Chris-Craft's 130 hp. "M" or 145 hp. "ML" can be obtained with reductions of 1.5:1 and 2:1. Constant operating temperature is aided by pre-tempering of cooling water in the manifold and by use of full-length water-jackets. Standard fuels can be used for high power output as a result of new refinements in carburetion.

"Chris-O-Matic," an electric hydraulic clutch shifting device, is available with all but the 60 hp. models.

Hudson American Telephone Redesigned

The powerful re-designed Mariner IV, especially developed for large commercial fishing craft, and the new Crusader II, a multi-purpose marine radiotelephone for medium-sized fishing boats, were featured by Hudson American Corp.

The Mariner IV offers seven pre-tuned operating frequencies plus the standard broadcast band. This telephone is housed in two separate units—the transmitter and receiver can be installed in the main cabin or on deck and the power supply elsewhere. The Crusader II, also built in two separate units, provides six channels and offers communication within a 100-mile cruising range.

The four-channel Privateer V is smaller, lighter, and more economical to buy and operate than its predecessors. It is made entirely of aluminum and weighs only 25 pounds. The 40-watt Corsair III offers six channels in addition to the standard broadcast band, and a new antenna coupling provides a degree of harmonic attenuation considerably over the proposed new F.C.C. regulations.

Viking I and II telephones are recommended for areas requiring high frequencies for long-range communication. They are high-powered units rated conservatively at 50 and 100 watts, respectively.

Bowers Batteries Have Increased Capacity

Marine batteries with higher ampere-hour ratings but without any increase in battery size are now possible because of a new active material that has been developed by the Bowers Battery & Spark Plug Co. An exclusive "finer milled" oxide that results in a superior active material, permits increased capacity to be built into more compact batteries. The new, higher capacity batteries are available in all voltages and in a complete range of space-saving sizes up to 1020 ampere hours.

Other improvements include a new exclusive grid metal that effectively resists grid corrosion, thereby adding up to 50% longer battery life. Microporous rubber and improved plastic, and plastic-glass separators provide greater resistance to high temperatures and acid. Split separators and pin holes, causes of shorts, are practically eliminated. High porosity keeps ample acid always in contact with plates.

The batteries have a tougher sealing compound that will not crack at low temperatures or get soft at high temperatures, and which forms a permanent acid-tight seal. Oversized cell connectors assure full power instantly at heaviest starting loads.

New Five-Blade Columbian Bronze Propeller

Columbian Bronze Corp. featured a small, five-blade propeller design, which is completely new. This propeller is being offered under the trade name Pentadyne, and its smooth, swept back contours were selected after exhaustive trials and thorough analysis of data accumulated during years of producing larger 5-blade propellers.

Substantial gains in smoothness and noise reduction are claimed for Columbian's new propeller, which is available in diameters 20" through 28" and in all normal pitches, right and left-hand.

International "Viny-lux Antifouling" Paint

Products featured by International Paint Co., Inc. included "Viny-lux Antifouling", which is an exceptional boat bottom paint of a hard, non-leaching film that gives extra protection either in salt or fresh water. This paint has proven its effectiveness on both wood and steel.

The new "Interlux Super-Touch-Up Varnish No. 100" is designed for touch-up jobs on varnished surfaces and as a priming coat where time requires the application of two coats within a limited time. "Interlux No. 35 Putty Bug Toxic Compound" is an exceedingly strong antifouling seam compound for underwater areas, while "Interlux G.M.C. Diesel Engine Enamel No. 83 Gray" is a heat-resistant paint of the same color with which G.M. Diesels are coated originally.

Wide Range of Horsepower in Kermath Engines

The four-cycle design of Kermath Diesels is claimed to give added running smoothness, as well as increased life expectancy. Kermath's 2-127 Diesel is a 2-cylinder engine which delivers 27 hp. at 1800 rpm., while the four-cylinder Kermath 4-226 Diesel is rated 60 hp. at 2600 rpm. The six-cylinder Kermath 6-298 Diesel delivers 75 hp. at 2000 rpm.

Kermath's 6-529 Diesel is engineered to deliver 130 hp. at 1800 rpm., while the Model 6-935 Diesel develops 190

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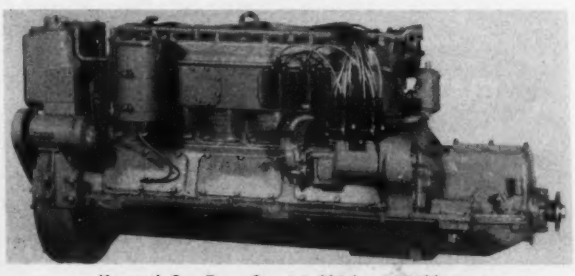


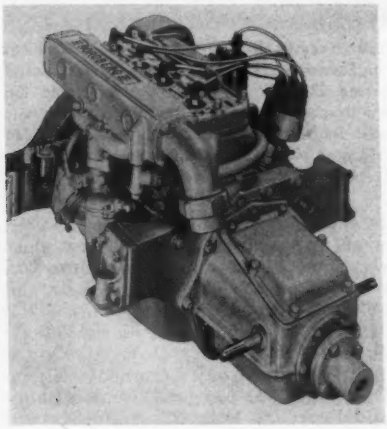
Kermath Sea-Farer Special, 225 hp. at 2400 rpm.

hp. at 1600 rpm. Engine weight to horsepower is low, and patented combustion chambers result in more efficient operation.

Four-cylinder gasoline engines include the Kermath Sea-Cub, which furnishes 25 hp. at 3400 rpm., and the Sea-Jeep, developing 61 hp. at 3600 rpm. Kermath has completely redesigned and modernized the Sea-Prince "six" gasoline engine, which provides up to 95 hp. at 3200 rpm., with overall length of only 40". The Sea-Prince Special is rated 105 hp. at 3600 rpm.

Kermath's six-cylinder Sea-Rover gasoline marine engine develops 130 hp. at 3000 rpm., while the improved Sea-Rover Special has ¼" more stroke and delivers 140 hp. at 3000 rpm.

The 160 hp. at 3000 rpm. Sea-Mate Special has improved cooling system; Kermath's Sea-Farer Special gasoline engine develops 225 hp. at 2400 rpm; its Sea-Raider Six is engineered to provide 280 hp. at 2450 rpm.; and the powerful Sea-Raider V-12 is designed for salt-water cooling.



Nordberg 4-cylinder, 60 hp. Colt, which is available this year with a 2:1 reduction gear as well as in direct drive.

Reduction in Over-all Size of Nordberg Engines

Nordberg gasoline marine engines in all horsepower ranges are now available with reduced length, width and depth to allow for a more compact installation. The 155 hp. Knight tops the Nordberg line of seven engine models, including the 130 hp. Tarpon, 110 hp. Marlin, 110 hp. Bullet, 95 hp. Arrow, 95 hp. Bluefin and 60 hp. Colt. The four-cylinder Colt is available this year with a 2:1 reduction gear as well as a direct drive gear.

Nordberg continues to meet the power requirements of commercial boat operators with a line of heavy duty engines, which are equipped with the exclusive Sta-Nu-Tral clutch and offer a wide range of power take-off options.

New Dearborn Interceptor V-8 Engine

A new 215 hp. "Y" block V-8 gasoline engine has been announced by Dearborn Marine Engines, Inc. The "Interceptor Ace" weighs only 2.907 lbs. per horsepower developed, for a total of 625 lbs. installed. It is a modern short stroke engine with a high 9.1 compression ratio and top operating engine speed of 4000 rpm.

The exclusive Dearborn carburetion system is nested in the "V" formed by the cylinders, and is designed so vapors or raw fuel are at all times confined within the intake system. This feature gives the Interceptors good protection from accumulation of vapors or raw fuel in the engine compartment or bilge.

In overall dimensions, the Interceptor engines are confined to a length of 36½", width of 26¾", a height above the crankshaft of only 16¼" and depth of 10"—giving a low silhouette. The Dearborn engineered planetary reverse gear has a self-contained hydraulic control.

In addition to the new Interceptor 215, other Interceptor models are manufactured in sizes of 125 hp., 145 hp., 160 hp. and 175 hp.

New Stewart-Warner Instrument Panel

An expanded and improved line of marine instrument panels, individual gauges and instruments was shown by the Instrument Division of Stewart-Warner Corp. Where space and expense is a problem, Stewart-Warner offers the new "Skipper" "all-in-one" panel, which includes water temperature, oil pressure and fuel level gauges, plus a tachometer.

Also featured were Stewart-Warner mechanical, electrical and portable hand tachometers; fuel level, oil pressure, water and oil temperature gauges; electric oil pressure and temperature gauges, ammeters, fuel level and vacuum gauges. Other products offered by the company are Motor Minders, electric fuel pumps and a safety panel designed to protect unattended or remote controlled engines from burned bearings, frozen pistons or other costly failures due to low oil pressure or high temperatures.

Improvements in Fageol "44" Inboard Engine

Ten major improvements in the 26.5 hp., Fageol "44" inboard marine engine (formerly the Aerojet) have been announced. This engine is a complete power package that is unusually light in weight.

The Fageol "44" now has new fluted-top aluminum camshaft cover which gives better cooling, quieter operation and improves appearance. Better shift operation is accomplished by new type shift springs and improved spring rod action, and stronger stainless steel control cable is now supplied with bronze pulleys to prevent corrosion. The exhaust pipe is raised above the water line.

Cutless rubber trunion bearings are used as support for the propeller shaft, and the propeller driveshaft design has been improved by use of solid ends. A new hook type key permits faster driveshaft replacement. In addition to the standard log shaft seal, a stuffing box is offered as optional equipment.

Vee-drive pulleys are now "hard-coated" for increased wear and resistance to corrosion, and vee-drive rocker arm castings are made of bronze, which prevents corrosion.

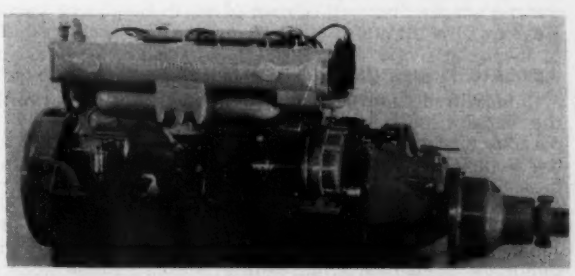
Lathrop High-Speed Gasoline Engines

Lathrop Engine Co. showed two four-cycle gasoline engines, including the 4-cylinder, 45 hp. LH-4, fitted with 2:1 reduction gear; and the 145 hp. LH-Super Special, with hydraulic reverse gear and 2:1 reduction.

The Lathrop LH-Super Special is a high-speed six-cylinder engine of 339 cu. in. displacement, which develops its rated horsepower at 3000 rpm. It has a bore of 4" and stroke of 4½", with seven precision shell type main bearings. Weight in direct drive is 936 lbs.

A feature of Lathrop's 45 hp. LH-4 model is smooth performance at all speeds, due to a special, large balance wheel which is especially valuable in trolling as it eliminates vibration at low speeds. This 133 cu. in. engine develops its rated horsepower at 2800 rpm., and is suited to use in purse boats and other small power boats.

Weight of the LH-4 in direct drive is only 440 lbs. Its bore is 3¼" with 4" stroke, and there are three precision shell type main bearings.



Port view of 145 hp. Lathrop LH-Super Special with 2:1 reduction gear.

Washington Fishermen Oppose Offshore Netting for Salmon

A debate has developed in the Pacific Northwest over proposed offshore net fishing for salmon, with Carl Ellison of Los Angeles on one side, and two fishery unions and the Puget Sound Gillnetters Assoc. on the other. Ellison maintains that at least a 50-mile offshore limit should be established for commercial salmon fishermen, or far enough out so that salmon can spawn.

Ellison has leased the 148-ft. refrigerator ship *Washington Star*, which he intends to offer to the Fish & Wildlife Service as a floating base for scientists in the high seas somewhere between Hawaii and Midway Island in the Pacific.

Immediate opposition to the idea of offshore netting for salmon has developed from Jack Wood, agent for the Alaska Fishermen's Union in Bellingham, and Joe Bettelli, business agent for Fishermen and Allied Workers Local 3. They believe that Ellison's ideas would destroy salmon conservation programs in effect for the past 17 years, and that the influx of deep-sea vessels from "outside" areas would be tremendous. Local seine boats would be inadequate to compete because of present equipment and size, and the two men claim it would mean the elmination of Puget Sound gillnet and reef net operations.

They also pointed out that American and Canadian representatives of unions and operators of the commercial fishing industry released a public statement last October opposing any offshore net fishing for salmon. A meeting in Alaska during December of all fishermen's groups also condemned offshore net fishing in Alaskan waters.

The Puget Sound Gillnetters Assoc. recently released the following statement concerning their views on the subject:

"Presently protests are being registered from every commercial fishermen's organization to our congressional delegates—and to the State Department over the seemingly uncontrolled mid-ocean fishery being carried out by Japanese in waters adjoining Alaska, with 72 million salmon falling prey to the Japanese nets this year.

"This organization has steadfastly stood in direct protest to any offshore fishery where salmon are taken; extreme danger of wiping out complete salmon runs could very easily result. This would, of course, refer to use only of nets.

"A well controlled salmon fishery, such as that supervised by the Pacific International Salmon Fisheries Commission, would allow for escapement while the harvest is conducted. This can best be accomplished when the harvest is near parent streams of salmon origin.

"Mr. Ellison and the firm he represents would upset this by conducting an American mid-ocean salmon fishery which only vessels of huge construction would enter."

Coast Oyster Co. Being Reorganized

Part interest in the Coast Oyster Co., South Bend, Wash., has been sold to Van Camp Sea Food Co., Inc. and the British Columbia Packers, Ltd., Vancouver, Canada. Van Camp will be handling the sales of all canned oysters produced by the Company, while B. C. Packers will sell all the fresh and frozen oysters produced. The headquarters of the firm will remain in South Bend, and Verne Hayes will continue as general manager.

Tacoma Hearings on Imports

Competition from low-cost Japanese fish is harming the Pacific Coast fishing industry, it was testified by a parade of fishing industry representatives at a hearing of the Senate Committee on Interstate and Foreign Commerce in Tacoma, Wash., December 5 and 6.

Representatives of industry, labor, business and civic groups agreed that some sort of quota on imports of Japanese tuna should be imposed; and that the Japanese should be prevented from fishing Alaska salmon runs.

At the same time, it was reported that hundreds of thousands of cases of Japanese salmon are being imported to the American market in the first such movement since before World War II. Some of the Japanese salmon was sold in the Seattle area, but most was shipped by rail to supply cities in other parts of the country.

New 36' x 11' patrol boat recently put into service by the Washington State Department of Fisheries. The craft, powered by a General Motors 4-71 Diesel turning 24 x 22 wheel, has an estimated top speed of 12 knots, and will operate out of Westport, Wash. She was designed by Edwin Monk, Seattle Naval Architect, and is equipped with Wood Freeman automatic pilot, Loran, RCA receiver and transmitter and Bendix depth recorder.

National Canned Salmon Week

The Conference of Pacific Coast Canned Salmon Brokers announced that the 1956 National Canned Salmon Week will be held February 15 to 22. Activities will stress promotion of "goodness, convenience and economy" of the product.

Committee members in charge include J. S. Gage, executive secretary; John N. Allen, D. F. Brennan, Phil Carmichael, Karl Dehn, Arthur McGovern, Walter C. Meredith, L. A. Petersen, J. E. Salmon, Walter P. Shiel, Jr., R. E. Silver and E. Guy Wilson.

Alaska to Have New Fall Salmon Season

A new Fall commercial salmon fishing season for residents of the Alaska Peninsula and Bristol Bay will be permitted in 1956, Donald McKernan, fisheries administrator, recently announced. Fishermen have reported seeing an abundance of pink salmon in the Nushagak River in the Bristol Bay area during the late Summer months. The late season along the Alaskan Peninsula will be for dog salmon and silver salmon, chiefly. Both areas will be open for gillnetting and trolling.

Pacific Fisheries Association Elects Murray

E. E. Murray of the Alaska Pacific Salmon Co. was elected president of the Association of Pacific Fisheries at the 42nd annual convention in Seattle November 28. The meeting was attended by industry representatives from Washington, Oregon, California, Alaska and Washington, D. C. A salmon conservation program, to be headed by Guy P. Halferty, was set up by the Association.

Vice-presidents of the Association are A. W. Brindle of Ward's Cove Packing Co., Seattle; T. F. Sandoz, Columbia River Packers' Assoc., Astoria; E. E. Wilkie, Pacific American Fisheries, Bellingham; and A. R. Barthold, Alaska Packers' Assoc., Seattle. Dr. E. D. Clark, Seattle, is secretary-treasurer.

Good Spring, Summer Salmon Runs in Columbia

Spring and Summer runs of salmon in the Columbia River rose this year to the highest point since 1938, but

(Continued on opposite page)

California Sardine Schools Being Spotted by Planes

A new development in the purse-seine night fishery for sardines off the coast of California is the use of small planes for spotting the schools and directing the setting of the seine. The sardine schools are clearly visible from the air at altitudes of from 500 to 1,000 feet.

After the schools of sardines are spotted by the airplane, the pilot gives detailed instructions as to when the net skiff should be dropped and the circle around the fish made. During the course of a six-hour flight, one pilot in a small plane successfully set nine purse seiners on sardine schools estimated to total about 500 tons.

At the present time over one-half of the purse-seine fleet is depending on the spotting planes to locate sardine and mackerel schools. It is believed that this method of spotting and setting on schools of pelagic fish has tremendous possibilities. There are three planes now operating out of San Pedro, and they scout the entire Southern California fishing areas all night when the seiners are out.

The pilot works on a share basis of 5 percent of the gross stock, and it is estimated that his share of the proceeds of the trips will average close to $200 based on an average catch of 100 tons.

Enjoy Long Albacore Season

The long albacore season ended just before Christmas. Boats which had been fishing since last March came back to Moss Landing to tie up for the Winter. Conrad Pederson of the *Sun-Ra*, Bill Harder of the *Seaway*, Bill Johnson on the *Elsie*, Oren Addleman of the *Dolores J.*, Ed Weidenaar on the *Pelican*, Bill Yeoman of the *Twenty Grand*, and many others were ready to call it a season.

Most of the men felt that the late southern fishing had been well worth while. They talked of staying down there next year for the full season and not making the central California run as they have in the past.

Sardine deliveries on the California coast late in December also exceeded last year's catch. Monterey and Moss Landing canneries took 14,240 tons of the total California catch.

Want to Outlaw Nets at River Mouths

Commercial salmon and shad fishing at the mouths of the Sacramento and San Joaquin Rivers again is threatened by sportsmen. A new group, financed largely by resort and bait shop owners, is circulating petitions seeking to outlaw nets.

Fishermen Seek to Lease Unused Cannery

Members of the California Commercial Fishermen's Assoc. have asked the Los Angeles Board of Harbor Commissioners to allow them to lease an unused cannery on Terminal Island for a retail fish market and dock facilities.

Pete Repovich, manager, and Fidel Schmitz, told the Board that 280 members of the group would put up $50 each to raise money to operate the old Sun Harbor Packing Co. cannery.

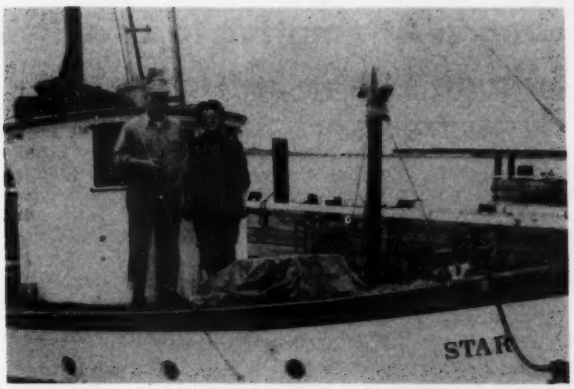
(Continued from previous page)

Fall runs continued to decrease. The Spring chinook run for March, April and May was a record of 171,600. The previous high since 1938 was 170,280 in 1953.

The fish are counted as they climb the bypass ladders at Bonneville Dam, which was built in 1938. The Summer chinook run was a record 93,100, compared to the previous high of 90,400 in 1952. The Spring steelhead run was 4,255; the Summer run, 157,360; and the Fall run, 36,790. The blueback run was a record 237,750, compared to 235,210 in 1953.

Seattle Landings for December

During December the Seattle otter trawl fleet landed 753,100 pounds of fish in 41 trips, or about 5,000 pounds more than the landings of the fleet for November. Rockfish landings predominated, with 187,600 pounds, followed by ocean perch, with 130,500 pounds, and true cod, with 121,000 pounds.



Capt. and Mrs. George A. Aitken of Eureka, Calif., aboard their 40' troller "Star". The craft has 110 hp. Nordberg engine and Sperry "Iron Mike" automatic pilot.

Purse Seiners Destroyed by Fire

Two San Pedro purse seiners were destroyed in fires at sea during the last month, but crews managed to escape both times, though loss of equipment ranged into the thousands of dollars.

On December 7 the *Hawk II*, a 76-ft. seiner skippered by Andrew Devlahovich of San Pedro, caught fire and burned to the water level before Coast Guard vessels could arrive. The boat was towed to a San Pedro yard for salvage of engine parts.

Eleven crewmen of the 78-ft. purse seiner *Discovery*, Capt. John Mizetich of San Pedro, were rescued by the seiner *Liberty Bell II* when their ship caught fire 15 miles out from San Pedro and sank.

Says Hake Fishery Could Be Developed

Robert Counts, Fish & Wildlife Service biologist at San Diego, says that a valuable commercial fishery could be built up on the West Coast with hake, which is now thrown back into the sea.

After a survey which reached from San Diego to the Canadian border, Counts reports that hake is found in general abundance along the 50-fathom curve from Monterey to Canada, and that it is probably equally abundant south of Monterey. Northern fishermen throw it back into the sea while fishing for sole and cod.

Hake may find a market through experiments now being carried out by the State of Oregon, where biologists have discovered the fish makes a good food for mink and for use in fish hatcheries. A bottom fish, West Coast hake has all the essentials for good human food, but the public never has been educated to use it.

Plant Silver Salmon Eggs

The California Fish & Game Dept. was to plant more than 200,000 silver salmon eggs in Big River this Fall. The step represents the first taken by the Department to rehabilitate the county's coastal streams as salmon producers. Eyed eggs were to be obtained from Washington.

San Pedro Sardine Catch Down Slightly

San Pedro purse seiners on December 21 reported a catch of only 650 tons of sardines, with the fishing continuing to be poor. The haul pushed the season's total to about 50,000 tons, still short of the 54,000 tons caught through December, 1954 by San Pedro boats. However, sardine tonnage receipts for the whole State are ahead

(Continued on next page)

Oregon Attempting to Establish Salmon Run in Suttle Lake

Attempts to establish a blueback salmon run in Suttle Lake, connected to the Deschutes River system via Lake Creek and the Metolius River, have been given added encouragement this year. Approximately 350 adult blueback appeared in the vicinity of the Oregon Fish Commission's salmon weir on the Metolius River this Fall. These fish were the result of a Suttle Lake liberation of 100,000 blueback salmon fingerlings by the Fish Commission in 1952.

The Fish Commission has liberated blueback salmon fingerlings in Suttle Lake each year since 1952. This year an estimate of fingerling survival in the Lake prior to seaward migration was obtained by trapping and counting blueback fingerlings leaving the Lake via Lake Creek. Approximately 45 percent of 51,000 fingerlings planted in late 1954 were counted moving out of Suttle Lake during May and June of this year.

Around 50,000 blueback fingerlings raised at the Metolius salmon hatchery were liberated by the Fish Commission in Suttle Lake this Fall.

Meeting on Columbia River Regulations

Preliminary proposals for regulation of the 1956 commercial fishing in the Columbia River were to be discussed at two public meetings December 20 and 21 at Astoria and Vancouver. Possible changes in the spring chinook, fall chinook and blueback regulations were to be emphasized.

Ten Mile Lake Salmon Tagging

More than 1600 silver salmon have been tagged by Oregon Fish Commission biologists in the outlet of Ten Mile Lake, according to M. T. Hoy, State Fisheries Director. Tagging began early in October and will continue as long as silver salmon are migrating into the Lake. Some of the fish are being captured near the outlet to the Lake by three large fyke nets, each 10 feet in diameter and 18 feet long. A trap made of cotton webbing is located just downstream from the old highway bridge.

The salmon are being tagged with dime-sized numbered plastic discs. Already Fish Commission biologists have seen approximately 7,000 spawning fish and have observed about 125 tags on these fish. By obtaining the ratio of tagged to untagged fish on the spawning grounds, the number of silver salmon which came into the Lake during the season will be calculated.

(Continued from previous page)

this year, totaling 67,340 tons to December 27, or 8% more than a year ago.

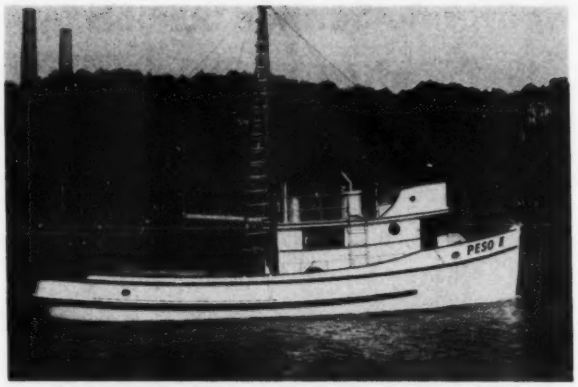
Effect of Dam on Fish to be Studied

Slated to begin this year are experiments by the Department of Fish & Game and the Fish & Wildlife Service to determine the effect of Trinity Dam on the salmon and steelhead runs. The Department also is studying a fisheries management plan for the 13,000-acre reservoir to be formed behind the dam.

Although actual groundbreaking for the dam was started in October by the Bureau of Reclamation, it will be several years before the dam is completed and the water blocked off. Many miles of spawning area above Minersville, site of the dam, will be cut off from the fish. Written into the legislation is a provision that no less than 150 cubic feet of water per second must be released into the river below the dam for fishlife.

Appointed to Research Committee

Gov. Goodwin J. Knight on December 15 appointed three San Pedrans to his Marine Research Committee, which plans research for development of commercial fisheries and fish industries in the Pacific Coast area. Named were J. R. Biven and Gilbert C. Van Camp, San Pedro cannery officials, and John V. Morris, cannery attorney.



"Peso II", 52' refrigerated salmon and tuna troller owned and operated by Capt. Leroy Herrington and his wife Doscha, recently delivered a 20-ton fare of albacore at Moss Landing, Calif. The "Peso II" typifies the latest in Pacific Coast combination trollers, and was built in 1952 at Ilwaco, Wash. Power is furnished by a 165 hp. General Motors Diesel delivering 10 knot cruising speed through 3:1 Twin Disc reduction gear. Other equipment includes Wood Freeman automatic pilot, Kolstrand hydraulic anchor winch and salmon gurdies.

Ocean Bottomfish Landings Higher

The Fish Commission announced that 21 million pounds of sole, flounder, rockfish and other marine fishes were landed in Oregon during the 1954-55 license year. This total was approximately 3 million pounds higher than landings during the 1953-54 period.

According to the Commission, during the period from April 1, 1954 through March 31, 1955, over 11 million pounds of salmon and other food fishes not including ocean bottom fishes were logged in at Oregon fish buying stations. Shellfish statistics also released by the Fish Commission listed a total commercial harvest of 310,000 lbs. of clams and 300,000 dozen crabs for the State during the same period.

Landings of salmon and other not strictly marine fishes dropped 1¾ million pounds from landings of the 1953-54 period. Most of the reduction in total production was due to comparatively smaller Oregon landings of steelhead, ocean troll-caught salmon and Columbia River gillnet-caught fall chinook salmon.

Landings of fish caught commercially in coastal rivers south of the Columbia amounted to 1,600,000 pounds during the 1954-55 season, which was 60,000 pounds over coastal river landings of the previous year.

Traps Used in Migration Studies

Huge fyke fish traps 10 ft. in diameter, 18 ft. long and weighing nearly 1,000 pounds, are being used by the Oregon Fish Commission in fish migration studies. The large fish traps are used in catching upstream migrants so they may be tagged for scientific purposes.

On the Snake River, 18 fyke nets are in place. The purpose of this investigation is to enumerate the runs of salmon and steelhead into the River.

Steelhead Tagged with New Type Marker

In a study which started November 27, more than 400 steelhead were tagged with a 12" bright yellow, hollow plastic streamer. Threaded with a special needle at the base of the dorsal fin, the tag bears a number and the wording "Return, Oregon Fish Commission, Portland" or "Return, Washington Dept. of Fisheries, Seattle".

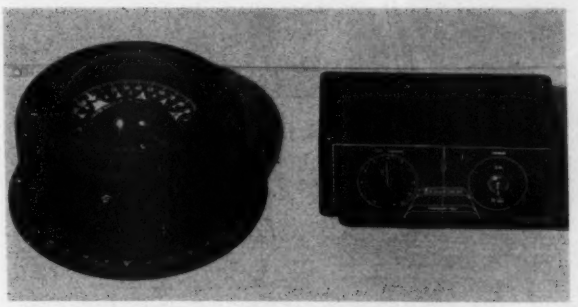
Purpose of the steelhead tagging is to determine the size of the run that comes into the Columbia River, the tributaries to which they're headed, the time of passage, and the method of recovery.

EQUIPMENT and SUPPLY NEWS

New Richardson Automatic Pilot

A. Richardson & Son of Warwick, Rhode Island, has announced their new low-priced Model M magnetic pilot for boats up to 55 ft. long. This magnetically-controlled pilot operates on an entirely new method—it is electrically timed. The major feature of the pilot is its one variable sea control, which immediately matches the pilot to any boat and gives precise rudder action in all sea conditions.

The Richardson Model M automatic pilot is designed ruggedly enough to be adapted to commercial duty. The device is only 7" square, and may be installed with any type of steering mechanism without major electrical or carpentry work. Operation of the equipment is economical.



New Model M Richardson automatic pilot for boats up to 55 ft. long.

New Falcon Self-Powered Fog Horn

Development of a self-powered emergency fog horn that meets U. S. Coast Guard requirements and "rules of the road" for both sail and power boat operators has been announced by the Falcon Alarm Co., Inc., The hand-held Falcon fog horn can be heard more than a mile over open water, and will deliver about 450 two-second blasts without refilling. Its sound output is rated at between 110 and 115 decibels.

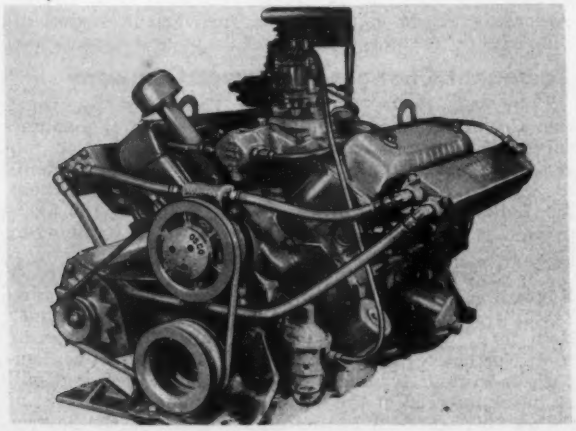
Powered by harmless Freon gas, the unit weighs about 3½ pounds. It consists of a 14-inch-long storage cylinder topped by a 6-inch-long horn and toggle valve assembly. The unit is operated by depressing the valve, and the toggle may be locked into open position for continuous operation.

Recharging of the units with Freon can be done at nominal cost either by qualified refrigerator servicemen or by the Falcon Service Department, 243 Broad St., Summit, N. J. Falcon fog horns powered by CO_2 or nitrogen gas instead of Freon are available on special order, as well as models incorporating either larger or smaller cylinders.

New Osco "Marined" Ford V8 Engine

To complement their 6-cylinder, overhead valve 115 hp. engines, Osco Motors Corp. has announced for 1956 a new 160 hp. overhead valve V8 Ford "Marined" engine of 272 cubic inches. The relatively short over-all length of this engine provides additional fore-and-aft room for increased cabin and cockpit areas, and generally precludes any need to break through cabin bulkheads to accommodate the engine.

The 1956 Osco "Marined" Ford engine line now embraces 12-volt electrical systems either negatively or positively grounded. Standard marine models use duplex carburetion, although "quad" carburetion for increased horsepower output is available as optional equipment. High ported Circuit-Flo exhaust manifolding and elevated starting motor are featured. Engine cooling is accomplished with single water pump in conjunction with built-in thermal well for uniformity of distribution and temperature control.



New overhead valve Osco "Marined" Ford V8 engine, developing 160 hp.

For 1956 Osco also announces an expanded line of its Convo marine conversion kits, parts, reversing gears and accessories for all popular Ford-manufactured engines. Detailed deluxe catalogues may be had by addressing Osco Motors Corp., Philadelphia 40-AF, Penna.

Power of Two "Cat" Diesels Increased

Two Caterpillar Series F marine engines have had their horsepower increased—the Cat D326 and Cat D337. The new continuous rating for the D337 Caterpillar engine is 182 hp. @ 1600 rpm. For the D326, it is 134 hp. @ 1600 rpm.

The Caterpillar D337 gets much of its extra power and higher efficiency through use of a turbocharger, which is a supercharger driven by exhaust gases whose energy would otherwise be wasted. The turbocharger supplies air according to engine load.

These improved marine engines have a long stroke design with 5⅛" bore and 6½" stroke, combining higher continuous horsepower with excellent torque characteristics. They are the first of the Caterpillar line to incorporate hydraulic valve lifters, which automatically maintain proper valve tappet setting. This new feature, coupled with the short valve train made possible by high location of the camshaft, allows many hours of adjustment-free operation.

Improved performance is provided by sodium-filled valves, valve rotators, hardened valve seat inserts, hardened cam followers and spray-lubricated cams. To produce a more compact engine, the entire accessory drive gear train was moved to the rear of the engine, replacing Roots blower gears of previous models.

New cylinder heads with through-flow engine breathing and greater strength have been designed for the Caterpillar engines. Piston and ring design has been improved with ¼" wide, spring loaded oil rings and heavier chrome plating on compression rings. A new cylinder block design provides better cooling water passages, and critical heat areas are cooled with more effective water and oil flow directors.

A new line of marine reverse and reduction gears built exactly to match "Cat" marine engines has been jointly developed by Caterpillar Tractor Co. and Twin Disc Clutch Co. Equipped with the new Twin Disc gear, the Cat D337 marine engine is 15 inches shorter than the former D337. This new compactness was achieved by

look to Nordberg in 1956

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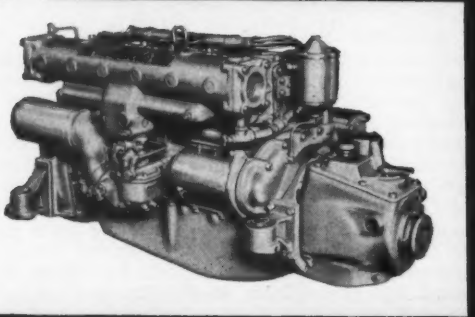
for a NEW HIGH in performance and dependability



Each year, since the production of the first Nordberg Gasoline Marine Engine, new improvements in design and operation have helped to establish the ever-increasing popularity of these modern engines among fishing vessel owners and builders from coast to coast.

In 1956, all seven Nordberg Gasoline Marine Engine models, from the 60 hp *COLT* up through the power-packed 155 hp *KNIGHT*, will give you a *new high* in *performance* and in *dependability* . . . through additional refinements in design and construction that make the 1956 engine line the best ever to bear the famous *Nordberg* name. Mail the coupon for full details.

See all seven NORDBERG ENGINES at the 1956 Boat Shows:

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SPACES B-31 & B-32
January 13 through 22

CHICAGO
SPACES 354 & 355
February 3 through 12

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mounting the two clutches side by side rather than in tandem.

The new Twin Disc gear has been designed and built for continuous operation at full load in either direction; for applications where extremely slow speeds are required, the gear can be equipped with a trolling valve. Finger-tip control of the gear, which is hydraulically operated, permits fast operation and easy maneuvering.

Hydraulic Gear Shifting with Capco-Matic

Capco-Matic hydraulic shifting units, made by Cleveland Aero Products, Inc., 13801 Triskett Road, Cleveland 11, Ohio, eliminate the labor of shifting on work boats and put it on the basis of easy, finger-tip control, with resultant greater maneuverability and all-around efficiency. Two models of Capco-Matic are available: Model 1100C, which develops 3600 inch pounds of torque, for use on engines to 250 hp.; and Model 4100 which develops 7200 inch pounds of torque and handles engines up to 650 hp.

The Capco-Matic hydraulic unit is mounted externally on the cross shaft of the transmission and by means of linkage can be controlled directly from the bridge. Complete control of the transmission is maintained, as well as "feel" during the actual shifting. Also, it is possible to revert to mechanical shifting in less than one minute, should there be any hydraulic failure.

There are two methods of obtaining the necessary hydraulic pressure. One method is to mount on the engine the pulley-driven pump, provided as a part of the Capco-Matic equipment. This is recommended for operators who have to shift frequently. The other method is to use a power pack unit, which operates only when shifting is necessary, this being recommended for the operator who runs for several hours without shifting gears.

Hobbs Direct-Reading Engine Hour Meter

A new "direct-reading" meter has been added to the Hobbs line of engine hour meters, according to an announcement by John W. Hobbs Corp., Springfield, Illinois. The new device answers the demand by many original equipment manufacturers and owners and operators of powered equipment for a direct-reading meter to supplement the pointer type models. It is a true timing instrument (not a revolution counter), and the timing mechanism is a finely-designed electrically-wound clock.

The new compact Hobbs meter is read in much the same way as the odometer in the speedometer of an automobile. Black figures show at a glance the total number of hours an engine has been operating; the red figure at the right indicates tenths of hours (6 minutes). A rotating disc in the upper left segment of the face of the meter acts as an operating indicator, making one revolution a minute. The meter registers up to 10,000 hours, then returns to zero.

The device is available in 6-volt, 12-volt, 24-volt, 32-volt, 64-volt and 110-volt models in three basic types: standard (mounted with 3 screws); flush mounting (held in place by a stirrup, no screws required); and aircraft. According to the manufacturer, the various models are offered at no increase in price over the pointer-type meters.

Personnel Changes at Sawyer Company

Charles L. Foote, President of The H. M. Sawyer & Son Co. of Cambridge and Watertown, Mass., manufacturers of protective clothing, rainwear and coated fabrics, has announced the appointment of William A. Reilly to the newly-created post of Assistant to the President. Mr. Reilly, a graduate of Massachusetts Institute of Technology, is Vice President of the industrial engineering firm of J. Saliba & Associates, Cambridge.

The Sawyer Company also has promoted Laurence Kogos to a newly-created post of Technical Director, and Zavan T. Khachadoorian to the position of Chief Chemist. Both men, who hold degrees in Chemical Engineering from Northeastern University, have been with the Company in various technical capacities since 1947, and will be headquartered at the Watertown plant. Promotion of the men is part of the continuing expansion of the Sawyer Company's research and development activities.

Louisiana Develops Methods to Test Freshness of Seafood

Two rapid and simple tests developed by food technologists at Louisiana State University will enable the seafood industry to determine the freshness of their shrimp and oysters, and thus prevent the possibility of poor quality seafoods being packaged and sold. There was about a ten percent spoilage of the shrimp caught in 1953, with a loss of about $3 million to the industry in Louisiana.

By using the new tests, it is believed that the industry can check itself on methods of handling and preservation of shrimp and cut spoilage to about three percent by improved methods, which would represent a saving of nearly $2 million.

The tests have their greatest value in that the industry now can determine in less than three hours whether the quality of the product is good enough to process, whereas most previous tests required from 48 to 72 hours to obtain similar results.

In one test the degree of acid formation in a standardized medium indicates the number of bacteria present. Another method concerns the time required for reduction of a dye by organisms. These reactions occur rapidly and are measured by observing color changes. The longer the color takes to change, the fewer bacteria present.

Vessel Lengthened by 35 Feet

The Patterson Shipyard last month started enlarging a vessel by adding 35 feet to the middle of the craft. The 95-ft. *Algarvio*, Capt. Howard Rochel, used in the menhaden fishing industry, had too small a hold for practical operations by the owners.

Under the direction of Capt. Rochel, the boat was brought up on the ways and literally cut in two sections at a point 55 ft. from the bow. The two parts were then jacked 35 feet apart, and the 23 specially-built ribs were slipped into place. The new section of the hull was then welded around the ribs, and the two old sections were connected to the new part.

Canned Shrimp Pack Down

Production of canned shrimp in the Gulf of Mexico for the period August 1 through December 3, showed the pack to be 104,110 cartons behind the comparable period of 1954, and 204,170 cartons behind the same period of 1953.

During November production declined even more than anticipated due primarily to Winter weather which acted to curtail production by limiting fishing. The scarcity of shrimp caused the prices paid to fishermen to soar, making it difficult to secure raw material.

There are two trends apparent in the canned shrimp industry. One is the increasing popularity of the deveined, or cleaned shrimp in all sizes, with a greater percentage of production being directed towards this style. The other trend is in the increased popularity of the squat can, which this year is being used for a larger share of the pack than ever before.

Alario Re-elected by Fishermen's Association

The Jefferson Parish Fishermen's Assoc. held an election of officers last month. The Association named Antoine Alario as president, for the ninth consecutive year. The group elected Herman Plaisance vice-president, and Robert Clary secretary-treasurer. Also elected were William Cooper, Jr. and Francis Cooper assistant treasurers; George Persohn, sergeant-at-arms.

On the Board of Directors are Euzebe Plaisance, Frank Marcomb, Jr., Sergin Dufrene, Joe Guidry, Jr., Edward Plaisance, Onizine Hebert, Alex Plaisance, William Cooper, Sr., Tom Alario, Jr., George Persohn, Kirby Marcomb and Joe Frickey.

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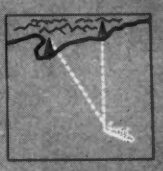

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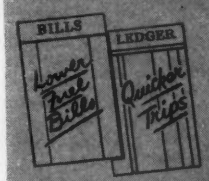

With Radiomarine Loran you can take advantage of favorable ocean currents that conserve your fuel. Quick positioning in any weather means cutting trip time . . . eliminating costly delays. And for fishing men, Radiomarine Loran helps you find the most profitable fishing banks quicker, indicates when you arrive, and helps keep you directly on your fishing position at all times.

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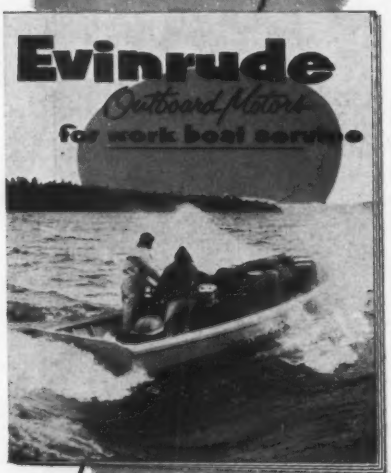

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Maryland Having Fine Oyster Season

About the middle of December one dredge boat came into Crisfield for repairs and brought in part of only a few days' catch of oysters—a total of 290 bushels, which brought $4.90 a bushel, or more than $1,400 for less than a week's work. Back in the 1920's when vessels left November 1 for the opening of the dredging season and came back by Christmas, they considered it a good season if they could dredge and sell enough shell-stock oysters to amount to $2,500.

A majority of the dredgers this year have been selling their oysters to buy-boats sent out by Crisfield packing houses. This allows the dredge boats to keep at their dredging operations without loss of time. Also, a number of dredge boats are said to have been selling their oysters this season to packing houses that operate at points closer to where they are dredging.

With most all other Eastern States reported to have a scarcity of oysters this season, large quantities of Maryland shell-stock has been going to some of the packing houses in those States. As a result prices have been high.

Shell oysters hit a high of $5.00 per bushel in Crisfield late last month, with supplies in the various packing houses reported to be low. Severe cold weather which was prevalent, causing ice to form in the river and sounds, slowed down tonging operations and handicapped dredging operations.

The $5.00 per bushel price reportedly paid for a load of oysters, if not an all-time high, seldom has been topped. And the average price paid for shell oysters this season has been higher than ever before, with most oystermen making more money than in previous years.

Hard crabs were still coming into Crisfield in large quantities, with the packing houses having to limit the number of barrels they bought from day to day. The cold weather did not affect crab dredging operations much. The price for hard crabs has been reasonable, and packers have been able to market the crab meat, even though a lot has been sold at low prices.

Soft Clam Industry Expanding

Maryland's soft shell clam fishery has grown steadily since development of the hydraulic clam dredge. Since enactment of legislation regulating the fishery effective last June 1, the number of dredge boats licensed in Queen Anne's, Talbot and Calvert Counties has increased from 48 to 77.

Current production is estimated at from 10,000 to 15,000 bushels a month, worth from $4 to $6 a bushel to the dredgers and averaging about $8 a bushel in the wholesale markets of New York and New England. The gross annual value of the fishery is estimated at about $1,250,000.

Expansion of the industry has been accompanied by a great deal of controversy concerning the effects of hydraulic dredging on resources of economic importance. The Department of Research and Education began a limited program of investigation in 1954, some results of which have already been published.

With the tax-supported research fund established by the Legislature in 1955 and now avaliable to the Department, the research program is being expanded. First priority is being given to a study of the effects of hydraulic dredging on the physical structure of the bottom and the productivity of shoal areas.

Capt. Wells Evans, Sr.

Capt. Wells Evans, Sr., veteran waterman, died on December 26 at his home in Crisfield, at the age of 70. Capt. Evans moved from Smith's Island to Crisfield about 21 years ago. For some years he was a seafood packer, but most of his life had been devoted to following the water, catching crabs in Summer and oystering in the Winter. He was recognized as one of the outstanding dredging skippers on the Chesapeake.

Georgia Shrimp Season Best in Several Years

Georgia's best commercial shrimping season in several years was scheduled to end for 450 boats on December 31. David Gould, State Game and Fish Commission coastal fisheries supervisor, said the closed season from January 1 through March 15 would be enforced.

Trawling will be prohibited off the Georgia coast for a distance of three miles, and no commercial shrimping will be allowed in inshore waters.

Some 350 Georgia boats and about 100 from other States operated out of Georgia ports during the season. Gould said the highest single day's catch by one boat was about 1,500 pounds, which brought the boat's operator about $600.

Doboy Sound Closed

Doboy Sound was closed to commercial shrimping on December 10. David Gould of the Game and Fish Commission reported a test sizing found shrimp in the Sound running 85 per pound, well over the 55 per pound minimum size allowed by the State.

Mississippi Plants to Use New Oyster Shucking Machines

The Blue Channel Corp. of Port Royal, S. C. has developed an oyster shucking machine which it claims is capable of doing the work of 48 women, can be operated on a 24-hour-a-day basis, will shuck from 70 to 85 bushels of oysters per hour, and will give a 23 percent increase in yield over hand-picking methods.

The machines are being manufactured by the Industrial Steel & Machine Works, Inc., Gulfport, and several of the seafood packers along the coast are planning to have them installed for this oyster season. French's Sea Food Co. at Pass Christian already has one of the shucking machines in operation.

However, William Cruso, Sr., who operates the C. C. Company, said that some plants will still employ hand shuckers. The new shucking machines require that the oysters be steamed before being put into the machine.

Oyster Shell Planting

During the two years July 1, 1953 to June 30, 1955 the Mississippi Sea Food Commission returned to the public oyster reefs 158,300 barrels of oyster shells at a cost of 30 cents a barrel. The Marine Research Laboratory of Ocean Springs has been cooperating with the Commission in making periodical inspections of the reefs, and the Commission gave $75,000 to the laboratory for building and equipment.

Shrimp Boat Burns

The *Matthew K.*, a 48-ft. shrimp boat owned by Kuluz Brothers Packing Co., Biloxi, and skippered by Capt. Oday Hebert, caught fire and burned last month in a bayou near the mouth of the Mississippi River. Three members of the crew escaped serious injury, but the boat was a total loss.

September Landings Up

Landings of fish and shellfish at Mississippi ports during September amounted to 11.4 million pounds, compared with 5.8 million pounds landed during the corresponding month of last year. This was an increase of 98 percent, directly attributable to greatly increased catches of menhaden.

For the fifth consecutive month, menhaden dominated the State's total production, making up 85 percent of the September landings. Shrimp and hard crabs followed in quantity landed.

Total landings at Mississippi ports during the first nine months of 1955 amounted to 146.2 million pounds, compared with 82.9 million pounds during the same period in 1954.

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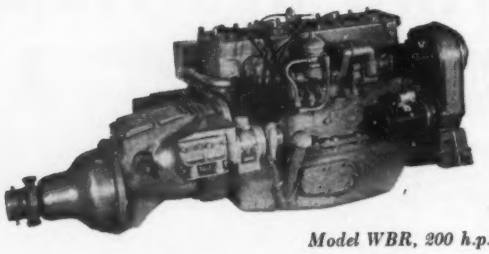

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No special fuels are required for this power-packed workhorse. It includes such advanced features as updraft carburetors; self-priming, diaphragm-type fuel pump. Its cylinder head has a specially designed combustion chamber. It has a large capacity oil pump, full-length water jacket, and the lubricating oil is pressure-fed to all important bearings. Has high-ratio reverse, and all models—WB, WBS, WBR2, WBR—are available with Chris-O-Matic (automatic clutch control).

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Cylinders	6
Bore	4¼ in.
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200 h.p.	at 3200 r.p.m.
Standard coupling bore (other sizes available)	1¼ in.

Available with opposite rotation and with reduction drive in ratios of 1.50:1 (Model WBS), 2.03:1 (Model WBR2), 2.54:1 (Model WBR).

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Great Lakes Producers See Need for More Hatcheries

Among the large, established fish producers of the Great Lakes, there is much hope for greater production of the leading popular varieties through increased establishment of hatcheries.

While Lake Superior each year has received more than an estimated 2,000,000 planted trout, to help nature replenish its supply, Lake Michigan has not, as far as is known, received a single planted trout since 1948 when the Michigan Conservation Dept. released some tagged fish.

Among the lawmakers who investigated the contention that Great Lakes waters are in need of planted fish, approval of increasing hatchery operations has been whole-hearted, and the commercial fishermen in the region have been much encouraged by the move to increase production of lake trout and whitefish in Lakes Michigan and Huron. It also is planned to plant millions of yellow and blue pike, particularly in Lake Huron where pike, generally, fare exceedingly well. Lake Huron, also, is reportedly ideal for whitefish, while Lake Michigan provides for lake trout a more sustaining home.

Frigid Weather Cuts Production

In the Great Lakes region, cold, icy winds and snow storms recently have played havoc with open water netting operations, resulting in a sizable decrease in production of fresh-water fish. By January, however, commercial producers are expected to commence some ice operations, primarily for smelt, herring and whitefish.

Ice had formed in many areas of northern Lake Michigan and Green Bay and many of the bays of Lake Superior. Farther south, however, some ice already had formed but was broken by stiff, blustery winds. On Lake Superior, gill net fishermen were reportedly getting but few fish due to hazards of unfavorable weather conditions. In the Bayfield, Wis. and Chassel, Mich. fishing areas of Lake Superior, herring netters chalked up a mediocre season.

In the Green Bay area, following a reasonably good herring season, fishermen were making only light catches of pike, herring, perch, chub, etc., while catches of smelt were beginning to increase under "spotty" conditions. In southern Lake Michigan area, fish producers were getting fair catches of chubs.

Commercial catches from Lake Erie in blue pike, carp, sheepshead, white bass, yellow perch and yellow pickerel have been fair to good. However, during the Winter months, due to ice hazards, many boats are beached for repairs and parts replacements and painting operations, while crews are repairing nets.

Lake Ontario fishermen reported good Fall catches, and

38' x 11' x 5' fishing tug "Lily-May", owned by E. Theo. Niles of Bayfield, Wis. She is powered with a 124 hp. Gray gasoline engine with 24 x 20 Michigan wheel, and is equipped with Whitlock cordage and Linen Thread Co. nylon nets.

through early Winter, production for them was above last year.

How to Improve Whitefish Quality

In a recently-issued pamphlet, the Canadian Dept. of Fisheries advises steps to be taken to improve quality of whitefish. In maintaining top quality of this catch, immediate cooling of the fish to 32°F. is the most essential single contribution a fisherman can make.

The Department gave the following rules to observe: 1. Ample ice aboard boats for immediate chilling of the catch. 2. The use of clean containers and new boxes. 3. Careful and thorough culling in order to remove stale, soft, defective or drowned fish. 4. Not packing over 50 lbs. of fish per box.

Green Bay Herring Run Reaches Peak

The annual herring run in Green Bay waters, starting a little late in 1955, reached its peak about December 1 in total production, according to Fred Klaus, manager of the Angwall Dormer Fish Co., Menominee, Mich.

Two vessels, the *Griffin* and the *American Girl*, were busy making runs into the Dormer docks from headquarters at Washington Island, Wis., from where practically all of the herring used at Dormer comes. The *Griffin* averaged about 30 tons per trip, while the *American Girl* at the time had checked in with 45 tons on her two trips. The *Griffin* made 14 trips.

Ohio Producers Have Average Season

Ashtabula, Ohio, commercial fishing companies, which include Barcelona Fish Co., Lake Erie Fish Co., Nurminen Fisheries and the Rebera Bros. Fish Co., ended the season's operations on December 20. Catches for the Ohio producers during the year were generally fairly steady.

Better catches of blue pike, perch, sheepshead and yellow pike were had, but Ohio boat owners are still confronted by a scarcity of experienced fishermen.

All along the southern shore of Lake Erie, from Port Clinton, Ohio, to Erie, Pa., fishing companies have ended netting operations and are making repairs to boats.

Rhode Island Has Heavy Trash Fish Landings

Receipts of fish and shellfish at Rhode Island ports during September amounted to 13.3 million pounds valued at $519,000 to the fishermen. Compared with the 3.7 million pounds valued at $219,000 reported for the corresponding month of last year, this represents an increase of 263 percent in quantity and 137 percent in value.

Receipts of fish for various industrial uses showed a very large increase over the landings of these fish during the same month of 1954, and accounted for 68 percent of the total September, 1955 landings.

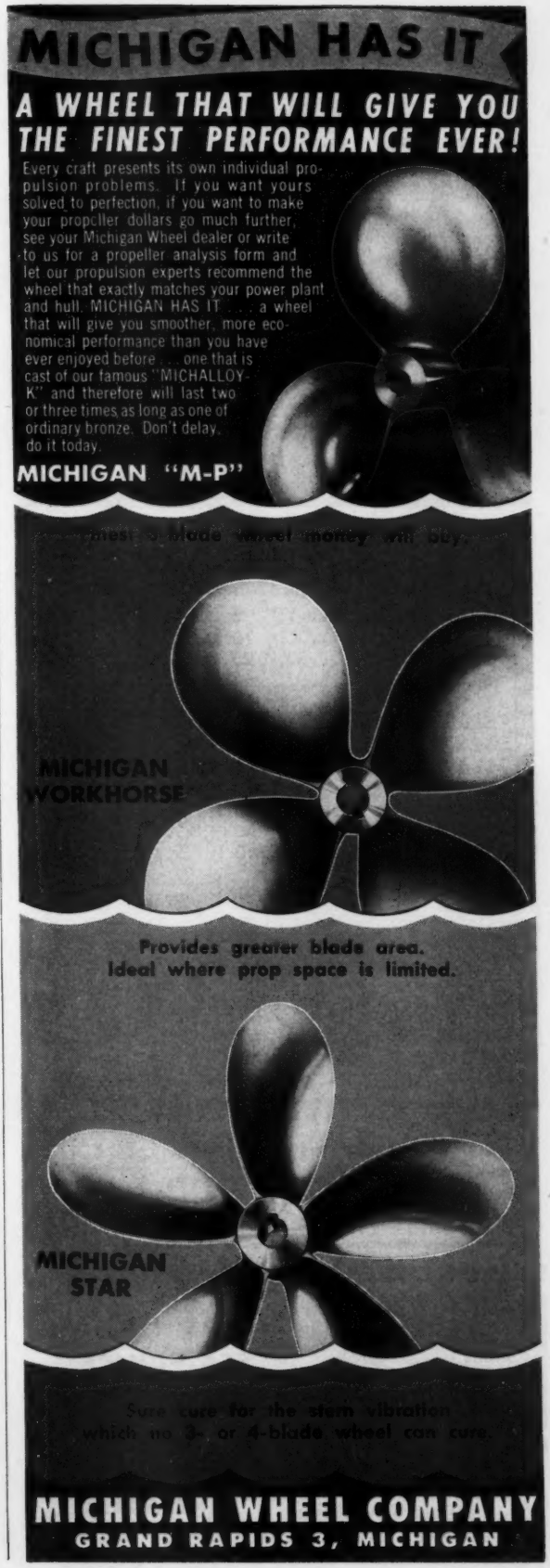
Shellfishermen Hampered by Winter Weather

Bitter Winter weather has placed a damper on business at Warren's shellfish corporation owned and operated exclusively by working shellfishermen. Lowell Wright, plant manager for the Eastern Seafood Corp., said the cold spell has cut supply to about half that of last December.

Menhaden Boat Damaged by Fire

An investigation of the early-morning blaze that burned out the forward section of the menhaden boat *Janet*, owned by Capt. Harold K. Champlin of Great Island, was started last month. At the same time, fishermen were critical of a State regulated wire fence that makes boats inaccessible to vehicles at night.

A 25-foot emergency aisle runs along the bulkhead behind the Point Judith Dehydrating Co., and its only entrance is chained by the Division of Harbors and Rivers at night.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☐ SEA-PRINCE (Spec.)	105 H.P.	6
☐ SEA-ROVER	130 H.P.	6
☐ SEA-ROVER (Spec.)	145 H.P.	6
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☐ SEA-RAIDER	280 H.P.	6
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☐ 2-127	27 H.P.	2
☐ 4-226	60 H.P.	4
☐ 6-298	75 H.P.	6
☐ 6-529	130 H.P.	6
☐ 6-935	250 H.P.	6
☐ HYDROJET	61 H.P.	4

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For Month of December

Hailing fares. Figure after name indicates number of trips.

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Alden (3)	24,000	Margie L. (4)	7,000
American Eagle (4)	39,000	Maria Immaculata (4)	22,500
Anna Guarino (5)	13,500	Maris Stella (2)	27,000
Ann & Marie (2)	1,500	Mary (4)	8,500
Annie (2)	3,500	Mary Ann (5)	31,000
Annie & Josie (5)	13,000	Mary E. (2)	3,500
Anthony & Josephine (5)	13,000	Mary Jane (1)	175,000
		Mary Rose (1)	50,000
Baby Rose (1)	32,000	Minkette I (5)	3,500
Bonaventure (2)	72,500	Morning Star (7)	32,200
		Mother Ann (1)	150,000
Carlannsul (3)	10,000		
Carlo & Vince (3)	33,000	Nancy & Maria (4)	8,500
Catherine B. (2)	30,000	Natale III (4)	54,500
Cigar Joe (4)	28,000	No More (3)	7,000
Curlew (2)	93,000	Nova Luna (2)	1,500
Cushmere (1)	82,500		
		Ocean Clipper (1)	8,000
Dawn (5)	13,500	Our Lady of Fatima (1)	200,000
Dolphin (1)	35,000		
Doris F. Amero (1)	18,000	Peggy Belle (5)	6,000
		Phyllis A. (2)	4,000
Eagle (1)	67,000	Pioneer (5)	6,000
Eddie & Lulu M. (4)	10,000	Ponce De Leon (5)	8,500
Estrella (1)	140,000	Priscilla (3)	4,000
Etta K. (3)	6,000	Prosperity (6)	10,000
Evelyn C. Brown (1)	120,000	Puritan (1)	15,000
Falcon (5)	30,000	Rodman Swift (2)	3,500
Figueira Da Foz (1)	29,000	Rose & Lucy (4)	30,000
Florence & Lee (1)	150,000	Rosemarie (1)	12,500
Flow (1)	245,000	Rose Mary (1)	9,000
Frances R. (5)	23,000	Ruth E. (1)	1,500
Frankie & Jeanne (4)	6,000		
		St. Anna Maria (5)	87,000
Gertrude E. (4)	4,500	St. Cabrini (5)	39,500
Giacoma (5)	9,500	St. Francis (7)	28,000
		St. John (3)	5,500
Hilda Garston (1)	50,000	St. Mary (9)	82,000
Holy Family (1)	10,000	St. Nicholas (1)	185,000
Holy Name (5)	17,000	St. Peter (4)	34,500
		St. Providenza (3)	7,500
Ida & Joseph (1)	13,500	St. Rosalie (3)	42,500
Immaculate Conception (4)	14,500	St. Stephen (4)	9,000
Irma Virginia (4)	7,000	St. Terese (4)	33,500
		St. Victoria (2)	57,000
Jackie B. (4)	10,500	Salvatore & Grace (4)	35,500
Jackson & Arthur (3)	8,000	Santa Lucia (5)	14,000
Jennie & Lucia (1)	7,000	Santo Antonio (1)	11,500
Joseph & Lucia (3)	184,000	Sebastiana C. (5)	51,500
Joseph S. Mattos (1)	157,000	Serafina N. (3)	14,000
Josie II (4)	17,000	Serafina II (5)	32,000
Judith Lee Rose (1)	120,000	Star of the Sea (3)	27,000
		Sunlight (1)	157,000
Killarney (1)	17,000		
Kingfisher (1)	210,000	Theresa M. Boudreau (1)	205,000
		Tipsy Parson (7)	8,500
Linda B. (4)	14,000	Trimembral (3)	4,500
Little Flower (4)	21,500		
Little Joe (5)	41,500	Vagabond (1)	43,000
Lone Ranger (4)	6,500	Veronica N. (1)	500
Luckimee (1)	230,000	Victoria (5)	4,500
		Villanova (1)	120,000
Madonna D. Siracusa (3)	3,500	Vincie N. (2)	30,000
Maine (1)	220,000	Virginia Ann (5)	23,500
Manuel P. Domingoes (1)	160,000		
Margaret Marie (1)	2,000	White Owl (4)	8,000
		Wild Duck (2)	27,000

Scallop Landings (Lbs.)

B. Estelle Burke (2)	12,000	Francis L. MacPherson (1)	7,000

ROCKLAND, MAINE

Araho (2)	151,000	Little Growler (1)	13,000
Crest (2)	375,000	Ocean (2)	525,000
Drift (2)	447,000	Squall (2)	305,000
Elin B. (1)	5,500	Storm (2)	525,000
John J. Nagle (2)	83,000	Surf (1)	220,000

Scallop Landings (Lbs.)

Pocahontas (2)	18,000	Rhode Island (2)	12,500

WOODS HOLE, MASS.

Arnold (4)	14,500	Madeline (4)	4,200
Cap'n Bill (1)	30,000	Morning Star (3)	3,200
Cap'n Bill II (1)	40,000	Priscilla (2)	14,100
Driftwood (1)	2,100	Priscilla V. (1)	5,900
Elva & Estelle (2)	3,800	R. W. Griffin (1)	5,900
Gertrude D. (1)	1,700	Southern Cross (2)	14,600
Kelbarsam (1)	6,400	Three Bells (2)	11,700

Scallop Landings (Lbs.)

Adele K. (1)	6,800	Stella Maris (1)	500
B. & E. (1)	2,500		

NEW BEDFORD

Adventurer (4)	65,100	Jeannie Ann (2)	25,700
Anastasia E. (4)	31,200	Julia Da Cruz (2)	28,500
Annie & Louise (2)	15,300		
Annie M. Jackson (4)	45,100	Katie D. (2)	53,500
Arnold (1)	11,000	Kelbarsam (3)	21,700
Austin W. (3)	35,100		
		Lorine III (2)	28,500
Barbara M. (2)	18,500		
Bernice (3)	16,700	Marie & Katherine (3)	36,400
		Mary E. D'Eon (2)	49,000
Capt. Deebold (4)	23,900	Mary Tapper (2)	32,000
Carl Henry (2)	57,500	Midway (2)	40,800
Carl J. (1)	8,000	Molly & Jane (3)	41,200
Charles E. Beckman (3)	38,500		
Charlotte G. (1)	13,500	Nautilus (2)	74,000
Christina J. (4)	38,200		
Comber (2)	25,800	Pauline H. (3)	105,100
		Phyllis J. (2)	18,300
Dauntless (4)	37,800		
Driftwood (1)	2,500	Roann (2)	29,500
		Roberta Ann (2)	40,500
Elva & Estelle (3)	26,600	Rose Jarvis (1)	6,600
Elva L. Beal (4)	32,700	Rosemarie V. (2)	18,700
Eugene & Rose (2)	25,000	Ruth & Nancy (5)	32,300
		R. W. Griffin, Jr. (1)	36,000
Falcon (1)	4,600		
		St. Ann (2)	24,700
Gannet (2)	64,000	Sea King (2)	28,500
Gertrude D. (2)	20,100	Shannon (3)	27,700
Gladys & Mary (3)	84,300	Solveig J. (2)	52,900
Growler (3)	48,100	Sonya (4)	28,000
		Stanley B. Butler (2)	98,000
Harmony (4)	46,200	Sunbeam (3)	40,300
Helen B. (2)	25,200	Susie O. Carver (3)	38,900
Hope II (5)	62,400		
Huntington Sanford (1)	5,500	Theresa & Jean (3)	81,000
		Two Brothers (1)	9,500
Invader (3)	80,000		
Ivanhoe (2)	11,800	Venture I (3)	43,500
		Victor Johnson (2)	30,600
Jacintha (2)	67,000	Viking (4)	70,800
Janet & Jean (3)	32,600		
		Whaler (1)	23,500

Scallop Landings (Lbs.)

Aloha (2)	17,700	Laura A. (2)	18,500
Alpar (2)	10,700	Lauren Fay (2)	21,000
Amelia (2)	15,900	Linus S. Eldridge (2)	18,600
Antonina (1)	1,300	Louis A. Thebaud (2)	10,100
		Louise (2)	16,500
Babe Sears (2)	10,800	Lubenray (2)	10,300
B. & E. (2)	12,000		
Bobby & Harvey (1)	6,500	Malene & Marie (2)	15,300
Brant (2)	13,000	Marmax (2)	15,600
Bright Star (2)	17,500	Mary Anne (2)	17,900
		Mary J. Hayes (2)	15,000
Camden (1)	8,500	Mary J. Landry (2)	13,700
Caracara (2)	22,000	Monte Carlo (2)	12,500
Carol & Estelle (2)	13,300	Moonlight (2)	14,500
Catherine & Mary (2)	11,300		
Charles S. Ashley (2)	14,000	Nancy Jane (2)	12,200
		Nellie Pet (2)	14,200
Dartmouth (2)	12,500	New Bedford (2)	12,000
Debbie Jo-Ann (2)	15,500	Newfoundland (2)	15,000
Dorothy & Mary (2)	17,000	Noreen (2)	18,000
Edgartown (2)	21,500	Palestine (1)	2,000
Eleanor & Elsie (2)	12,000	Pearl Harbor (2)	11,500
Elizabeth N. (2)	17,300	Pelican (3)	29,600
Empress (1)	2,700	Porpoise (3)	14,200
Ethel C. (2)	17,500		
Eugene H. (2)	18,300	Rush (1)	10,000
Eunice-Lilian (2)	11,500	Ruth Moses (1)	7,500
Fairhaven (2)	17,800	Santa Cruz (1)	4,000
Falcon (3)	9,400	Sea Ranger (2)	11,300
Fleetwing (2)	15,500	Smilyn (2)	10,100
Friendship (2)	5,000		
		Ursula M. Norton (2)	21,000
Jerry & Jimmy (2)	17,000		
John G. Murley (2)	16,000	Vivian Fay (2)	14,000
Josephine & Mary (2)	15,500		
		Wamsutta (2)	13,300
Kingfisher (2)	17,500	William D. Eldridge (2)	19,700
		William H. Killigrew (2)	9,400

NEW YORK

Charlotte M. (2)	79,700	Hazel B. (2)	82,500
Clipper (2)	77,200	Joseph S. Mattos (2)	64,500
Edith L. Boudreau (2)	62,800	Manuel P. Domingos (1)	40,000
Evelina M. Goulart (1)	46,000	Tina B. (2)	71,000
Golden Eagle (2)	63,000		

Scallop Landings (Lbs.)

Barbara & Gail (2)	13,400	Miriam A. (2)	13,500
Beatrice & Ida (2)	14,900	Muskegon (2)	9,900
Carol-Jack (2)	16,300	Norseman (2)	12,000
Catharine C. (2)	11,400	Patricia (1)	3,400
Clipper (1)	5,000	Phyllis J. (2)	12,800
Enterprise (1)	6,500	Richard Lance (1)	5,200
Felicia (2)	17,800	Rosalie F. (1)	4,500
Florence B. (1)	6,200	S. No. 31 (2)	13,300

SEATTLE

Halibut Fleet Fishery

Angeles (1)	21,000	Presho (1)	2,000
Lane (1)	11,800		

A 4-lb. Standard Danforth,* a 20-lb. yachtsman's kedge and a 50-lb. stockless anchor all hold the *same* on a mud bottom. It's the DANFORTH* design that gives the utmost in *holding power* . . . so replace useless weight with easy-to-handle Danforths.*

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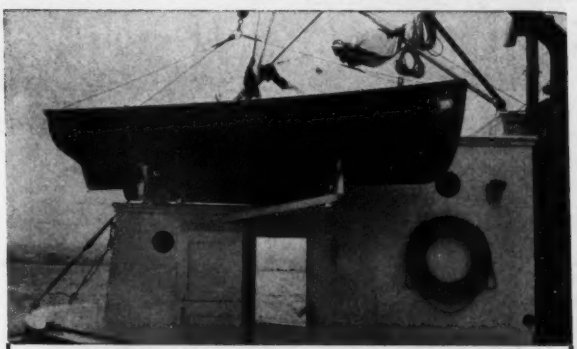

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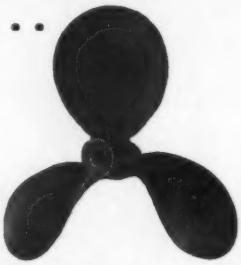

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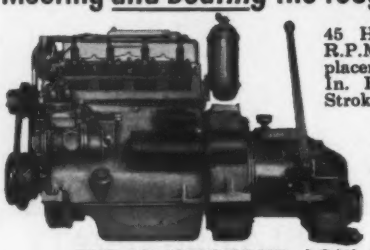

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- Safe, dependable, economical!

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Addie Mae (1)	2,000	Mary & Jennie (2)	8,400
Agatha (3)	121,800	Mary & Joan (2)	118,100
Agatha & Patricia (3)	48,000	Mary Rose (2)	92,000
Alphonso (3)	9,700	M. C. Ballard (1)	45,300
Angie & Florence (3)	34,100	Michigan (2)	147,700
Annie & Lucy (4)	10,400	Mother Frances (2)	59,100
Arlington (2)	281,900		
		Nancy B. (2)	29,800
Baby Rose (2)	88,100	New Star (3)	166,700
Bay (2)	124,600	Notre Dame (3)	78,500
Bonaventure (1)	52,900	Nova Antonio (2)	3,700
Bonnie (2)	150,600		
Bonnie Billow (2)	106,500	Ocean Clipper (1)	32,000
Bonnie Breaker (2)	128,500	Ocean Wave (2)	64,800
Bonnie Breeze (2)	216,800	Ohio (2)	102,600
Brighton (3)	206,100	Olympia (2)	45,000
Buzz & Billy (3)	92,200	Olympia La Rosa (3)	86,600
Cambridge (3)	300,400	Pam Ann (2)	122,000
Carmela Maria (2)	14,500	Patty Jean (2)	194,600
Catherine B. (1)	3,300	Phantom (2)	135,500
Columbia (3)	91,700	Pilgrim (2)	96,800
Comet (2)	116,500	Puritan (2)	78,400
Dolphin (1)	31,100	Racer (3)	298,400
Doris F. Amero (2)	53,200	Raymonde (3)	131,200
		Red Jacket (3)	300,800
Eagle (1)	45,800	Roma (1)	3,200
Elizabeth B. (2)	126,700	Rosa B. (2)	188,100
Emily H. Brown (1)	78,500	Rosalie D. Morse (2)	75,800
		Rosie (5)	15,200
Flying Cloud (2)	224,800	Rush (3)	214,000
Four (2)	103,400		
		St. Anthony (2)	91,300
Geraldine & Phyllis (2)	72,100	St. Joseph (2)	33,300
		St. Nicholas (1)	47,400
Holy Family (2)	70,900	St. Victoria (1)	54,500
		Sant' Antonio II (2)	10,900
Jane B. (2)	61,300	Santa Maria (4)	48,800
J. B. Junior (2)	150,200	Santa Rita (1)	6,800
J. B. Junior II (4)	15,100	Santa Rita II (3)	21,700
Jennie & Lucia (2)	78,700	Star of the Sea (1)	45,200
Josephine P. II (3)	82,600	Sunlight (2)	62,300
		Swallow (2)	137,400
Killarney (3)	67,200		
		Texas (2)	160,000
Lady of Good Voyage (1)	26,500	Thomas D. (3)	82,200
Lady of the Rosary (2)	49,600		
Leonard & Nancy (3)	83,400	Villanova (3)	67,900
		Vincie N. (1)	24,700
Magellan (4)	58,200		
Maine (2)	140,200	Wild Duck (2)	87,000
Manuel F. Roderick (3)	154,100	Winchester (3)	327,900
Maria Del S. (1)	4,000	Wisconsin (2)	233,100
Maris Stella (1)	33,300		

STONINGTON, CONN.

America (1)	1,800	Lisboa (1)	1,300
Bette Ann (15)	13,900	Little Chief (10)	6,000
Carol & Dennis (1)	7,600	Marise (12)	8,600
Carolyn & Gary (10)	12,600	Mary H. (3)	1,100
Connie M. (12)	6,500	New England (1)	6,300
Fairweather (14)	28,200	Old Mystic (9)	10,300
Five Sisters (1)	1,400	Our Gang (2)	13,400
Irene & Walter (14)	18,800	Rita (1)	2,100
Jane Dore (13)	7,900	William B. (9)	15,200
Lt. Thos. Minor (12)	12,500	William D. (1)	4,300

PORTLAND, ME.

Agnes & Elizabeth (4)	108,000	Little Growler (1)	30,000
Alice M. Doughty (1)	5,000	Medan (1)	140,000
Alice M. Doughty II (4)	82,000	Minnie (1)	90,000
Andarte (2)	67,000	Ocean Life (1)	175,000
Dorothy & Ethel II (2)	19,000	St. George (2)	225,000
Elinor & Jean (4)	63,000	Silver Bay (2)	65,000
Ethelina (4)	109,000	Theresa R. (3)	159,000
Gulf Stream (3)	284,000	Vandal (4)	162,000
Kennebec (3)	79,000	Winthrop (2)	95,000

Scallop Landings (Lbs.)

Adele K. (1)	10,000	Mary & Julia (2)	12,500

New Fisheries Yearbook and Directory

The 1955 edition of the Fisheries Yearbook and Directory is obtainable for $5 post free, from J. D. Griffiths, Esq., 3606a, Parkwood Drive, Greensboro, North Carolina. Every aspect of the industry, from fishing to fish cookery, is dealt with in this encyclopedia of the fishing business.

The book describes a study of developments in marine equipment for fishing vessels. A survey of fish catches, consumption, imports and exports and other major events during the past twelve months in all the principal countries, brings up to date the records published in previous editions.

New Jersey Oyster Packers Discuss Sanitation Rules

The New Jersey oyster packers met at Port Norris recently to hear about the details of the Shellfish Sanitation Manual which is being revised by the U. S. Public Health Service. There was an excellent turnout for the meeting, with every oyster packing firm in South Jersey represented.

The items which brought about the most discussion during the presentation by Eugene Jensen of the Public Health Service, were the time limit for oysters to remain in the shucking pot, the return of the overage, and the use of sealed gallon containers.

Several of the group, including Norman Jeffries, Lee Robbins and Mac Fowler, pleaded that the time in the shucking container be changed to a reasonable time instead of the fixed limit specified in the draft of the Manual. They also felt that the sealed gallon container was not necessary, since the friction top can has been used without accident for many years.

Others present from the industry included W. L. Hollinger, E. C. Hickman, Henry Jones, William Sharp, John Bradway, Edward C. DuBois, Orvell Rumbold and Clyde Phillips.

Striped Bass Caught in Nets

The fishermen employed at the High Point Fishery at Beach Haven landed a 67-pound striped bass in their nets recently. It was shipped to the New York market where it brought $26.80, or 40 cents per pound. The High Point Fishery recently was purchased by Harry Willits of Beach Haven.

Heavy Menhaden Landings

Landings of fish and shellfish at New Jersey ports during September amounted to 82.1 million pounds. This represents a gain of 72 percent over the landings of the corresponding month of a year ago, and was caused by particularly large catches of menhaden.

Food species showing increased production were bluefish, butterfish, croaker, sea trout, hard crabs, hard clams and scallops.

Connecticut Fishermen Recommend Ban on Scalloping for One Year

Stonington scallop fishermen ended their poorest scalloping season in several years on January 1. Several recommended that a ban be placed on scalloping for at least one year to allow the seed crop to develop.

All inland waters west to the Groton town line including Stonington Harbor were closed to scalloping as of January 1.

Dragger Sinks at Dock

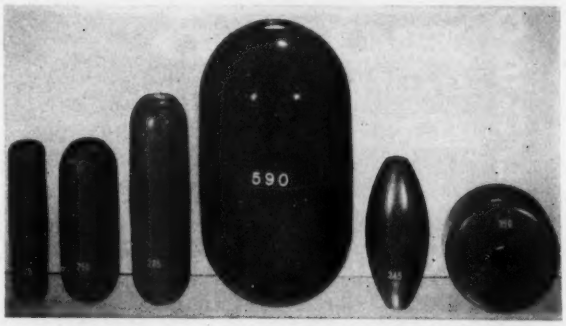
The 62-ft. Stonington fishing dragger *William D.*, owned by William Parsons of Montauk and skippered by Capt. Edmund Roderick of Stonington, sank at her berth at Bindloss Dock after she had apparently sprung a leak. The dragger was loaded with about 60,000 pounds of trash fish when she went down.

The craft was raised the next day and after the load of fish was salvaged, she was taken to the Post Boat Yard in Mystic where she underwent necessary repairs, and then rejoined the fleet.

Orville R. Tallmadge

Orville R. Tallmadge, president and general manager of the Tallmadge Oyster Co. of Norwalk, died last month at the age of 42.

Don't Be Caught With Your Nets Down



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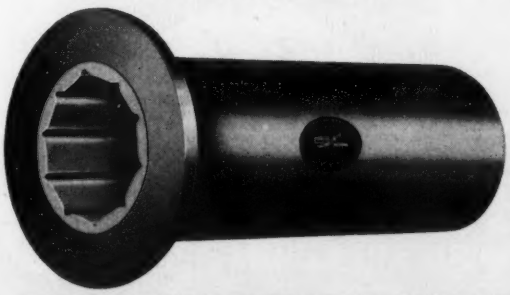

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January 3 to 31

Alabama Shrimp Production Shows 30 Percent Increase

Landings of fish and shellfish at Alabama ports during September totaled 1.4 million pounds. Compared with the 1.3 million pounds landed during the same month of last year, this represents an increase of 8 percent. Shrimp continued to lead all other species in volume landed, with receipts reaching 936,000 lbs., or 68 percent of the month's total catch. Mullet was in second place, followed by hard crabs and red snapper.

The September shrimp catch was up 30 percent, and the total landings of all fish and shellfish at Alabama ports during the first nine months of the year amounted to 10.8 million pounds. Shellfish species accounted for 75 percent.

Ruling on Sales Tax

A Mobile dredging firm must pay sales tax on fuel and supplies purchased for its boats even though they operate outside the State, according to a ruling handed down by the Alabama State Supreme Court on December 22. The Supreme Court maintained that an exemption for "ships plying on high seas" doesn't apply to vessels using the intercoastal waterways.

The suit acted on was that brought by the Bay Towing and Dredging Co., which operates tugs and barges dredging oyster shells in Mobile Bay. The shells are hauled as far as Carrabelle, Fla., through intercoastal waterways.

Small Dragger Design

(Continued from page 14)

(modified tugboat) appears to be fairly satisfactory in these boats, causing, however, some pounding. Its chief disadvantages appear to be that it is heavy, expensive and produces less bearing than a transom stern. The flat transom is usually limited to craft shorter than 65 feet length; it is the cheapest of all. V, or round, in plan view is sometimes shown in this stern, but adds some cost to the transom form of stern to no practical advantage. Flat vertical transoms may produce trouble in a heavily-loaded boat in a following sea in these small craft, and so this stern seldom has been seen in draggers far offshore until recent years, though flat transoms raking sharply outboard at deck have been common in sailing fishing craft.

In small craft, there is no practical advantage in a dead-flat amidships. Some boats have a raised deck or turtle-back forward, often very short and rather high to protect the men working on deck. Boats above 60 feet on deck may have a low raised quarterdeck, but many boats are flush. The boat shown here has somewhat less deckhouse than the most recent of her size and class, a desirable departure in the writer's opinion. Bulwarks are usually 22 to 26 inches high and are sometimes raised amidships by a vertical washboard.

The distribution of weight in these boats is fixed to a great extent by their employment. This makes it desirable to design the ends very carefully and to avoid bunching the bulk of displacement amidships. If the latter were done it would usually result in a hull that pitched heavily, in a "hobby-horse" fashion. Heavy rolling and pitching in these craft is most objectionable. The effect of distribution of ballast as a corrective is to be considered, but the possibilities appear limited. Trim is a most troublesome problem, enhanced by the lack of design control over selection of mechanical equipment.

Finally, it might be noted that in all aspects of small dragger design, success in the long run will depend upon the knowledge exhibited in the interplay of technical and economic factors. It is quite useless to produce an "engineering masterpiece" if it cannot be operated economically in its intended area of use—no matter what would be the result elsewhere.

Gloucester May Get Co-op Lobster Pound

Gloucester members of the Atlantic Lobstermen's Co-operative have spearheaded a move to bring that organization's lobster pound to Gloucester. Now located in Saugus, it has been becoming increasingly apparent that the water there was not the best for lobsters. Not only was it warm, but at low tide a high percentage of fresh water was pumped into the tanks.

The Co-op has taken a lease on a piece of property at Lane's Cove, next to the public landing, and including the old coal sheds there. If a fund-raising drive is successful, they plan to build a cinder-block plant, with an inlet pipe near the narrow entrance to the harbor.

The Co-op has some interesting plans for the future that may take shape after they are settled in Gloucester. With a new system of closed circuit tanks for keeping lobsters alive away from salt water, the organization sees the possibility of establishing distribution centers in heavily populated areas of the country.

Two Draggers Damaged by Fire

The 42-ft. dragger *Ruth E.*, owned by Mrs. Angelina Loiacano and skippered by Capt. Salvatore Loiacano, was gutted by fire last month while tied up at the Gorton Wharf. The fire also damaged the roof of a building at the Wharf.

Misfortune dogged the course of the burning dragger *Veronica N.* early last month. As skipper Eugene N. Naves and crew member Thomas Brancaleone fought flames in the fo'c's'le aided by a Coast Guard crew, the boat smashed onto the only rock on Good Harbor Beach.

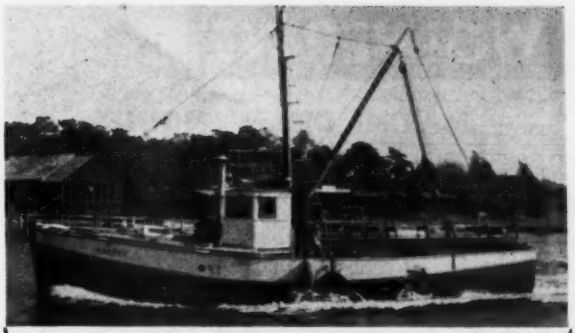
Harbor Ledges to be Removed

In its dredging of Gloucester harbor, the Bay State Dredging Co. has located two large ledges off Duncan's Point, near the old Frank F. Smith Fish Co. pier. The Coast Guard has been requested to mark the locations so as to warn marine traffic, and the Division of Waterways, State Department of Public Works, plans to eliminate the two ledges in the near future.

Location of Wrecks Plotted

Two wrecks of concern to Gloucester fishermen have been definitely located, and their positions plotted. The first, on Georges Bank, is that of the *Lera G.* Her approximate location is 41 degrees, 10 minutes north; 66 degrees, 58 minutes west.

The second wreck is that of the Gloucester dragger *California.* The Coast Guard calls her dangerous, with masts showing, and eight feet of water over her at mean low water between Dry Salvages and Little Salvages in Sandy Bay. The exact location is 42 degrees, 40 minutes and 25 seconds north; 70 degrees, 34 minutes and 19 seconds west.



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New Bedford Fishermen Adopt Fleet Insurance Plan

A fleet insurance plan which will result in a 12½ percent premium reduction the first year, was adopted by owners of more than 50 scallopers and draggers at the annual meeting of the New Bedford Seafood Producers Assoc., Inc.

The plan was one of five studied by a special committee during the past eight months, and includes protection and indemnity insurance coverage, which covers everything for which an owner is liable except damage to his boat. It will be handled by Charles S. Ashley & Sons, Inc. of New Bedford, brokers for British Steamship Mutual. Only vessels that are members of the Association are eligible.

Members applying for coverage must meet minimum standards of fitness determined by the underwriters, and inspection of vessels to determine fitness is to be done by a surveyor. The plan also specifies that claims adjustment would be handled by an individual, not an attorney, whose base of operation would be in New Bedford. The adjuster would have authority to pay minor claims up to $1,000, but the Association must be allowed to peruse the case before actual settlement is made.

At this meeting the following officers were elected: Leif Jacobsen, president; Mathias Bendiksen, vice-president; William H. White, treasurer; and John A. Murley, secretary.

Directors for scallopers named were Moses Schonfeld, Peder H. Eiesland, Napoleon T. Holmes, Michael Smith, Shirley G. Mitchell and Morris Phillips.

Directors for large draggers are John G. Murley, John J. Gobell, Sofus Mortensen, Olaf Anderson, Jens Larsen and Jacob Jacobsen.

Directors for small draggers are Rudolph Matland, Ernest R. Murley, Louis H. Skinner, Warren B. Vincent, Francis Folger and John A. Sylvia.

Scalloper Damaged by Fire

The 109-ft. scalloper *Empress* was badly damaged by fire at sea on December 16. Fire broke out in her engine room 50 miles east of Nantucket, and the 11-man crew battled the blaze in rough seas whipped by a 30-mile-an-hour wind. The vessel was saved after the crew chopped holes in the deck and pilot house to get hose lines down to the blaze. She is owned and skippered by Capt. George Kohler of New Bedford.

Big Day's Catch

Twenty-one draggers and nine scallopers on December 5 landed the largest catch since the hurricane threats last Summer. A total of 342,800 lbs. of fish and 76,300 lbs. of scallops constituted the haul. Severe offshore weather conditions and periodic storms have kept daily fish and scallop landings to a minimum the last two months.

The highest price for scallops since September was paid November 30, when four scallopers arrived in port nearly empty-handed. The *Catherine and Mary, Charles S. Ashley* and *Louis A. Thebaud* received a price of 62.75 cents per pound for their respective catches of 3,000, 1,000 and 1,000 lbs., and the *Rush* received 62.80 cents per lb. for her 6,500-lb. catch.

On December 29 the price paid for yellowtail in the Pier 3 auction room was the highest of the season. A catch of 9,500 pounds landed by the *Mary E. D'Eon* sold for 29.50 cents a pound. Average price at this time of year for yellowtail is from 12 to 14 cents.

Marine Research Station Being Sought

Efforts to establish a maritime research and experimental station in New Bedford have been revived in a new drive to spark industrial development. It has been suggested that the station be located at the New Bedford Institute of Textiles and Technology, and later moved to a permanent site.

John E. Foster, president of the Institute, stated that

studies relative to the processing of fish and other marine products could be carried on in such a station, and that a program of research and experimentation to determine better and more efficient uses for the vast stores of unused marine life could be followed.

Lobster Travels More Than 30 Miles

A tagged lobster brought up recently in a drag by the Provincetown fishing vessel *Liberty Belle* has been identified as one of 22 lobsters caught by the Fish & Wildlife Service vessel *Delaware* some distance off Cape Cod, tagged and liberated in Scituate last July 1. During the last few months this particular lobster had traveled more than 30 miles.

"Abram H." Freed from Beach

The New Bedford scalloper *Abram H,* reported last month to be in danger of breaking up after going aground, was finally freed by Coast Guard boats and pulled into deep water. Last month she was at the Island Service Co. Wharf, Nantucket, where she was being pumped out. She was then towed to Gloucester for additional repairs at the Gloucester Marine Railway Corp.

Photograph Scallop Beds

The Fish & Wildlife Service vessel *Albatross III* returned to Woods Hole on December 19 from a cruise during which scientists studied the abundance and geographic distribution of the organisms upon which haddock feed. They also dredged and tagged scallops and photographed scallop beds.

Scallop studies were conducted at 10 stations. Eight hundred scallops were tagged and released, and approximately one hundred photographs of scallop beds were taken.

Massachusetts Lobstermen Want Short Lobster Meat Banned

A legislative commission is considering a proposal for law to prohibit the sale of imported lobster meat taken from lobsters considered "short" by the Massachusetts standard. The commission is headed by Sen. Silvio O. Conte of Pittsfield.

Capt. Frank Moore of Green Harbor reported that similar legislation had helped the lobstermen in New Hampshire. He said that a differential of 25 cents in the price per pound of canned lobster meat there had aided the local lobstermen in meeting the competition.

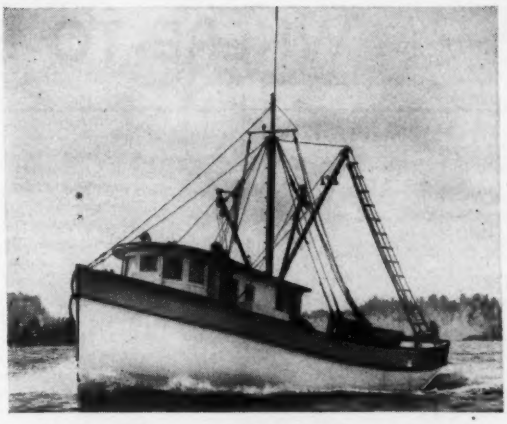
Others speaking in favor of the proposed measure included Gordon L. Howland of the Mayflower Seafood Co., Plymouth; Atty. David S. Junlan, representing several individual lobster dealers, and Louis Orsillo of Saugus, representing the Atlantic Lobster Fishermen's Cooperative.

Fishing Boat Damaged by Fire

The 100-ft. fishing boat *Catherine T.*, owned by Kevin Cleary of Dorchester, was damaged by fire as she lay at the Newport Shipyard Pier early last month. Three crewmen escaped but lost their personal effects. They were William Simpson of Dorchester, Frank Githered of New London, Conn., and William Brenton of New Bedford.

Bill Would Regulate Clam Takes

Under a proposal filed by Reps. John F. Dolan and Barclay Warburton of Ipswich, the amount of hard-shell clams that could be dug by any one person at any one digging would be regulated by the Commonwealth. Another bill filed by the same Representatives would require sea clams to be sold at wholesale by weight.



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FISHERIES TRAINING SHIP *Umitaka Maru,* which was completed by Japanese shipyard, is said to be most modern in world, and is being used by Tokyo University of Fisheries. In wheelhouse, ship's heading, speed, engine revolutions, and so forth are fed into electronic device which automatically records the course made good on a time scale.

Equipped to fish trawls from stern, drift nets, or long lines, the 223' ship has refrigerated holds and freezing compartments.

CANADIANS MAY BORROW up to $4,000 in Government-guaranteed loans to finance purchase, construction and repair of fishing boats and gear. New law applies to both coastal and inland fishermen.

NORWEGIAN HERRING CATCH for 1955 showed a drop from 1954. The 1955 landings were 2,153 million pounds, compared to previous year's 2,399 million pounds. Frozen herring exports were highest on record.

AFRICAN FISHERIES RESEARCH on pilchard and jack mackerel (massbanker), will be stepped up. Plans include addition of 10 new scientific positions to Fisheries Division; construction of further laboratories at Sea Point research center; construction of three new research vessels; and completion of new shore laboratory and living quarters at Stompneus.

GIANT AUSTRALIAN SHRIMP may be exported soon to United States. Queensland Fish Board recently sent snap-frozen sample shipments to both U. S. and United Kingdom, with favorable response.

PLASTIC ICE BAGS are now being used by British fish firm, to insure that fresh, healthy and, above all, dry lobster and crabs reach their markets on European continent. Under old method, especially in warm weather, live shellfish came into contact with considerable amount of fresh water from melting ice, which tended to spoil their flavor.

FISHERY TRADE FAIR will be held in Copenhagen, Denmark, from May 18 to 27, 1956, and will be on International basis. It will be meeting place of wholesale merchants, buyers and sellers, manufacturers of accessories and all kinds of gear for fishing industry, exporters and importers from all over the world.

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Buy surplus direct from Government at tremendous savings. Boats, motors, gear, machinery, power tools, truck, jeep, hundreds others. List $1.00. Surplus Bulletin, Box 169NAE, East Hartford 8, Conn.

TRAWLER "PATRICIA-ANN" FOR SALE

Trawler *Patricia-Ann*, 78 ft., single screw, General Motors Diesel, Model 110, 275 hp. Winch driven by General Motors 4-71. New tanks, batteries, radio, Loran steering, wiring, etc. Presently scalloping (also complete fishing gear for change-over if desired). No reasonable offer refused. R. Bishop, 2124 Mill Ave., Brooklyn 34, N. Y. Tel. Esplanade 7-8319.

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Fully equipped dragger *Elin B.*, 72' x 17', double planked. Buda engine, Loran, radiotelephone. Leased Fischlupe. Address inquiries to Mrs. E. R. Seavey, P. O. Box 599, Tillson Wharf, Rockland, Maine. Tel. Rockland, Me. 1753.

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Practically new Cummins HRM, 6-cylinder, 165 hp., S-N 2:1 reverse gear, T-D front power take-off, complete fresh water cooling system, bilge pump, hydraulic governor, 32-volt electrical equipment, mounting base rails. New engine warrantee. 3 to 1 reduction available. Cummins Diesel Engines of Conn., Inc., 37 Airport Road, Hartford, Conn.

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Wanted: Salesmen and brokerage companies to sell our Nationally advertised brands barbed wire, nails, baler wire, fishing trawl cables, manila clad hanging cables, industrial and marine wire ropes all types, manila ropes, sisal ropes, seine twines, sisal wrapping twines, jute twines, cotton twines, etc. Liberal commissions paid. Large warehouse stocks available for fast delivery. Bob Stone Cordage Co., Chariton, Iowa. Branch office 2838 Frenchman St., New Orleans, La., and other port cities.

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Wanted to invest in fishing venture whereby integration from sea to table of consumer will result. Fabulous returns on investment. Forward details on experience, references, and capital available, if any, to Box 55, National Fisherman, Goffstown, N. H.

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Converted to fishing dragger, fully equipped. Hull in excellent condition—new deck, pilot house, keel. Wolverine Diesel engine 140/160 hp. @ 360/400 rpm., run very little since overhauled at factory April, 1953. Reasonable offer can be financed with 25% down payment and balance payable in 3 years. For details write Box 56, National Fisherman, Goffstown, N. H.

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Write for our catalog containing $10,000,000.00—Government acquisition cost—worth of Diesel engines, generators, electric motors, gasoline engines, fuel transfer pumps, deck winches, bilge pumps, and all miscellaneous marine and construction equipment. Benjamin and Jay Corporation, 3618 N.W. No. River Drive, Miami 42, Florida.

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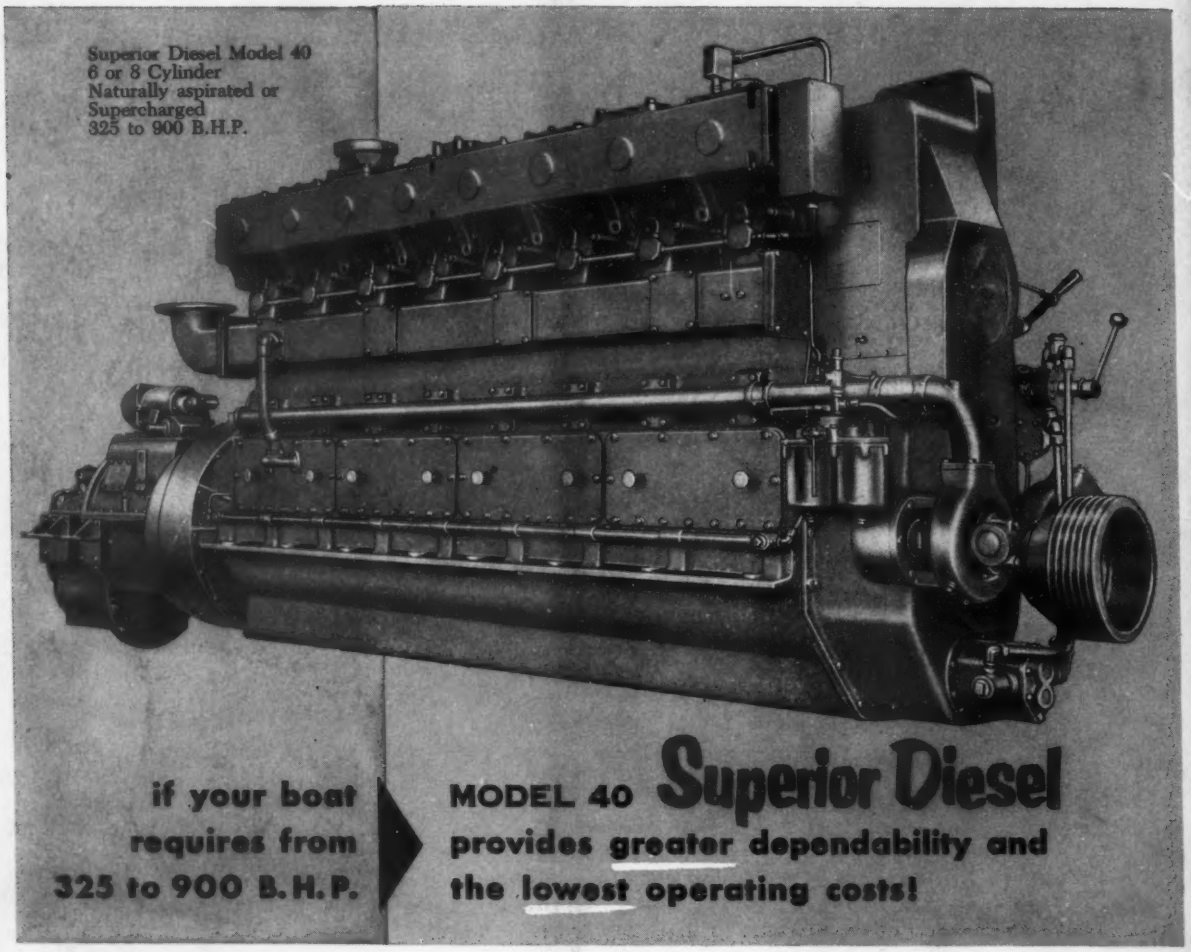

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